577D--A
EVOLUTION® 15 SEER SINGLE-PACKAGED AIR CONDITIONER AND GAS FURNACE SYSTEM W/PURON® (R-410A) REFRIGERANT
2-5 NOMINAL TONS (SIZES 24-60)

bryant®

Product Data

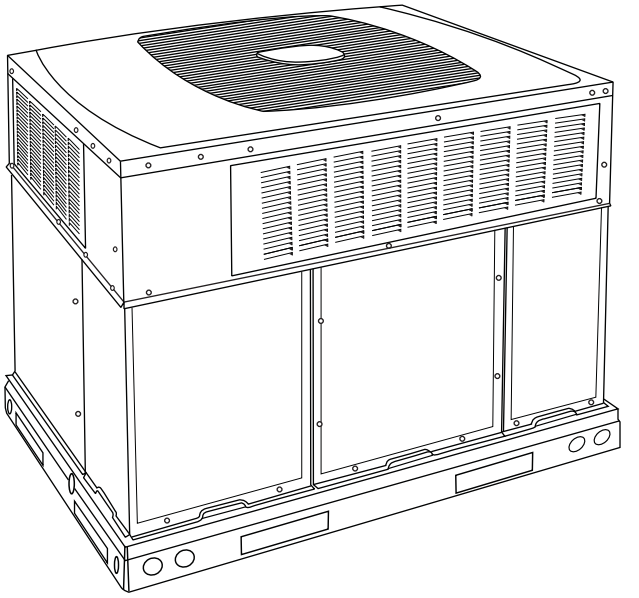

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Fig. 1 - Unit 577D-A

Single-Packaged Products with Energy-Saving Features and Puron® refrigerant.

- Direct Spark Ignition
- Up to 15.5 SEER
- Up to 12.0 EER
- Meets Energy Star requirements
- Up to 80.1% AFUE
- Low Sound Levels
- Full Featured ECM Motor (Standard)
- Factory Installed TXV
- Stainless Steel Heat Exchanger
- Two Stage Cooling and Heating
- Advanced Dehumidification Feature

FEATURES/BENEFITS

One-piece heating and cooling units with low sound levels, easy installation, low maintenance, and dependable performance.

Puron® Environmentally-Sound Refrigerant is Bryant's unique refrigerant designed to help protect the environment. Puron refrigerant is an HFC refrigerant which does not contain chlorine that can harm the ozone layer. Puron refrigerant is in service in millions of systems proving highly reliable, environmentally sound performance.

Perfect Humidity™ Technology featuring Evolution® control and Variable-Speed Blower motor and two-stages of cooling and heating provide greater comfort, humidity control, and energy efficiency.

Innovative Unit Base Design

On the inside a high-tech composite material will not rust and incorporates a sloped drain pan which improves drainage and helps inhibit mold, algae and bacterial growth. On the outside metal base rails provide added stability as well as easier handling and rigging.

Variable-Speed Blower motors provide better comfort and energy efficiency. Economical constant fan for less than $50 a year, which provides improved indoor air quality and more even temperatures from room to room; and reduced indoor noise due to lower air velocity. In addition, you'll realize improved installation flexibility with 3 different airflow choices for best overall comfort.

Easy installation

Factory-assembled package is a compact, fully self-contained, combination gas heating/electric cooling unit that is pre-wired, pre-piped, and pre-charged for minimum installation expense. These units are available in a variety of standard and optional heating/cooling size combinations. Units are lightweight and install easily on a rooftop or at ground level. The high tech composite unit base eliminates rust problems associated with ground level applications.

Convertible duct configuration

Unit is designed for use in either downflow or horizontal applications. Each unit can be converted from horizontal to downflow and includes horizontal duct covers. Downflow operation is provided in the field to allow vertical ductwork connections. The basepan seals on the bottom openings to ensure a positive seal in the vertical airflow mode.

Efficient operation

High-efficiency design with SEERs (Seasonal Energy Efficiency Ratio) of up to 15.5 and AFUE (Annual Fuel Utilization Efficiency) ratings as high at 80.1%.

Energy-saving, direct spark ignition saves gas by operating only when the room thermostat calls for heating. Standard units are furnished with natural gas controls. A low-cost field installed kit for propane conversion is available for all units.

Dedicated Low NOx units designed for California installations. These models meet the California maximum oxides of nitrogen (NOx) emissions requirement of 40 nanograms/joule or less as shipped from the factory and MUST be installed in California Air Quality Management Districts or any other location where a Low NOx rule exists.

Durable, dependable components

Compressors have two stages of cooling and are designed for high efficiency. Each compressor is hermetically sealed against contamination to help promote longer life and dependable operation. Vibration isolation provides quiet operation. Compressors have internal high-pressure and overcurrent protection.

Monoport inshot burners produce precise air-to-gas mixture, which provides for clean and efficient combustion. The large monoport on the inshot (or injection type) burners seldom, if ever, requires cleaning. All gas furnace components are accessible in one compartment.

Turbo-tubular™ heat exchangers are constructed of 409 stainless steel for corrosion resistance and optimum heat transfer for improved efficiency. The tubular design permits hot gases to make multiple passes across the path of the supply air.

In addition, dimples located on the heat exchanger walls force the hot gases to stay in close contact with the walls, improving heat transfer.

ECM Motor is standard on all 577D--A models.

Direct-drive, PSC (Permanent Split Capacitor) condenser fan motors are designed to help reduce energy consumption and provide for cooling operation down to 55°F (12.7°C) outdoor temperature. This unit is capable of low ambient cooling down to 0°F (-17.7°C) ONLY when using the Infinity control. A low-ambient kit is not required, and the outdoor fan motor does not need to be replaced for Infinity controlled low ambient operation. Low ambient cooling must be enabled in the UI set-up.

Evolution® User Interface is designed to work as a system with Bryant's single-packaged product.

Refrigerant system is designed to provide dependability. Liquid refrigerant filter driers are used to promote clean, unrestricted operation. Each unit leaves the factory with a full Puron refrigerant charge. Refrigerant service connections make checking operating pressures easier.

Thermostatic Expansion Valve—A hard-shutoff, balance port TXV maintains a constant superheat at the evaporator exit (cooling cycle) resulting in higher overall system efficiency.

High- and Low-Pressure Switches give added safety and reliability to the compressor.

Indoor and outdoor coils are computer designed for optimum heat transfer and cooling efficiency. The indoor coil is fabricated from copper tube and aluminum fins and is located inside the unit for protection against damage. The outdoor coil is internally mounted on the top tier of the unit. Copper fin coils and pre-coated fin coils are available from the factory by special order. These coils are recommended in applications where aluminum fins are likely to be damaged due to corrosion. They are ideal for seacoast applications.

Low sound ratings ensure a quiet indoor and outdoor environment with sound ratings as low as 75 dBA.

Easy to service cabinets provide easy 3 panel accessibility to serviceable components during maintenance and installation. The basepan, with integrated drain pan, provides easy ground level installation with a mounting pad. A nesting feature ensures a positive basepan to roof curb seal when the unit is roof mounted. A convenient 3/4-in. (19 mm) wide perimeter flange makes frame mounting on a rooftop easy.

Evolution Furnace Control board provides safe and efficient control of heating and simplifies trouble-shooting through its built-in diagnostic function.

Heating

- Reliable direct spark ignition system
- Two-speed PSC inducer motor with ball bearings
- Low stage heating delivers 65% of high-stage capacity

Cabinets are constructed of heavy-duty, phosphated, zinc-coated, pre-painted steel capable of withstanding 500 hrs of salt spray. Interior surfaces of the evaporator and electric heater compartments are insulated with foil-faced insulation, which keeps the conditioned air from being affected by the outdoor ambient temperature and provides improved indoor air quality. (Conforms to American Society of Heating, Refrigeration and Air Conditioning Engineers No. 62P.) The sloped drain pan minimizes standing water in the unit, which is provided with an external drain.

Louvered grille provides hail and vandalism protection for the coil.

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MODEL NUMBER NOMENCLATURE

577D N W A 24 000 A A – –

Type of Unit
577D – Single Packaged Air Conditioner and Gas Furnace System

Electrical Supply
N – 208/230–1–60

Variations

Major Series

Nominal Cooling Capacity
24 – 2.0 Tons
30 – 2.5 Tons
36 – 3.0 Tons
42 – 3.5 Tons
48 – 4.0 Tons
60 – 5.0 Tons

Gas Heat Input Size (Btuh)
040 – 40,000
060 – 60,000
090 – 90,000
115 – 115,000
130 – 130,000

Low NOx Indicator
A – Standard
N – Low NOx

Minor Series

Variations
TP – Base unit with tin plated indoor coil hairpins

See Price Page for full list of factory options.
Only used if ordering an option

ASHRAE 90.1 COMPLIANT

GAS-FIRED
c UL us LISTED
c UL us LISTED

AHRI CERTIFIED
www.ahridirectory.org

Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program For verification of certification for individual products, go to www.ahridirectory.org.

ENERGY STAR

AHRI* CAPACITIES

Cooling Capacities, Efficiencies

Unit 577D--A	Nominal Tons	Standard CFM (High / Low Stage)	Net Cooling Capacities (Btuh) (High / Low Stage)	EER @A**	SEER†
24040 24060	2	800 / 600	22,600 / 17,600	11.4	15.5
30040 30060	2-1/2	1000 / 700	28,600 / 21,400	11.6	15.0
36060 36090	3	1200 / 850	34,600 / 24,400	12	15.0
42060 42090	3-1/2	1400 / 975	40,500 / 29,000	11.6	15.0
48090 48115 48130	4	1600 / 1100	46,000 / 33,400	11	15.0
60090 60115 60130	5	1750 / 1200	57,000 / 40,500	11	14.5

Heating Capacities and Efficiencies

Unit 577D--A	Heating Input (Btuh) High/Low	Output Capacity (Btuh) High / Low	Temperature Rise Range High °F (°C)	Temperature Rise Range Low °F (°C)	AFUE
24040 30040	40,000 / 26,000	32,000 / 21,000	20-50 (11-28)	15-45 (8-25)	78
24060 30060 36060 42060	60,000 / 39,000	49,000 / 31,000	25-55 (14-31)	25-55 (14-31)	78.6
36090 42090 48090 60090	90,000 / 58,500	74,000 / 47,000	35-65 (19-36)	35-65 (19-36)	79.2
48115 60115	115,000 / 75,000	93,000 / 61,000	30-60 (17-33)	30-60 (17-33)	80.1
48130 60130	130,000 / 84,500	103,000 / 68,000	35-65 (19-36)	35-65 (19-36)	80.0

LEGEND
db—Dry Bulb
SEER—Seasonal Energy Efficiency Ratio
wb—Wet Bulb
COP—Coefficient of Performance
HSPF—Heating Season Performance Factor
* Air Conditioning, Heating & Refrigeration Institute.
** Ratings are net values, reflecting the effects of circulating fan heat. Ratings are based on:
Cooling Standard: 80°F (26.6°C) db, 67°F (19.4°C) wb indoor entering air temperature and 95°F (35°C) db outdoor entering air temperature.
† Rated in accordance with U.S. Government DOE Department of Energy) test procedures and/or AHRI Standards 210/240.

Note: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up to date ratings information.

PHYSICAL DATA

UNIT SIZE	24040	24060	30040	30060	36060	36090	42060	42090
NOMINAL COOLING CAPACITY (ton)	2	2	2–1/2	2–1/2	3	3	3–1/2	3–1/2
NOMINAL HEATING INPUT (Btu/hr)	40,000	60,000	40,000	60,000	60,000	90,000	60,000	90,000
SHIPPING WEIGHT (lb)	426	431	433	438	522	530	544	552
(kg)	193	196	196	199	237	240	247	250
COMPRESSORS	2–Stage Scroll							
Quantity	1							
REFRIGERANT: PURON (R–410A)								
Quantity (lb)	10.1	10.1	11.3	11.3	9.5	9.5	13.8	13.8
(kg)	4.6	4.6	5.1	5.1	4.3	4.3	6.3	6.3
REFRIGERANT METERING DEVICE	TXV							
Size	2 Ton	2 Ton	3 Ton	3 Ton	3 Ton	3 Ton	4 Ton	4 Ton
OUTDOOR COIL								
Rows...Fins/in.	2...21	2...21	2...21	2...21	2...21	2...21	2...21	2...21
Face Area (sq ft)	13.6	13.6	15.3	15.3	17.5	17.5	19.4	19.4
OUTDOOR FAN								
Nominal Cfm	2700	2700	2700	2700	2800	2800	2800	2800
Diameter (in.)	22	22	22	22	22	22	22	22
(mm)	559	559	559	559	559	559	559	559
Motor Hp (Rpm)	1/8 (825)	1/8 (825)	1/8 (825)	1/8 (825)	1/8 (825)	1/8 (825)	1/8 (825)	1/8 (825)
INDOOR COIL								
Rows...Fins/in.	3...17	3...17	3...17	3...17	3...17	3...17	3...17	3...17
Face Area (sq ft)	3.7	3.7	3.7	3.7	4.7	4.7	4.7	4.7
INDOOR FAN								
Nominal Airflow (Cfm)								
Comfort	Variable based on Comfort Roll back (see User Interface instructions for more information).							
Efficiency	700	700	875	875	1050	1050	1225	1225
Max	800	800	1000	1000	1200	1200	1400	1400
Furnace (gas ht.) airflow–Low Stage	475	727	475	727	745	875	745	875
Furnace (gas ht.) airflow–High Stage	844	1120	844	1120	1120	1410	1120	1410
Size (in.)	10x10	10x10	10x10	10x10	11x10	11x10	11x10	11x10
(mm)	254x254	254x254	254x254	254x254	279x254	279x254	279x254	279x254
Motor HP	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4
FURNACE SECTION*								
Burner Orifice No.								
Natural Gas Qty...Drill Size (Factory Installed)	2...44	3...44	2...44	3...44	3...44	3...38	3...44	3...38
Propane Gas Qty...Drill Size	2...55	3...55	2...55	3...55	3...55	3...53	3...55	3...53
HIGH–PRESSURE SWITCH (psig) Cut–out	670 ±10							
Reset (Auto)	470 ± 25							
HIGH–PRESSURE SWITCH 2 (psig)								
(Compressor Solenoid)								
Cut–out	565 ± 15							
Reset (Auto)	455 ± 15							
LOSS–OF–CHARGE /								
LOW–PRESSURE SWITCH								
(Liquid Line) (psig)								
Cut–out	23 ± 5							
Reset (auto)	55 ± 5							
RETURN–AIR FILTERS Throwaway†								
(in.)	20x24x1				24x30x1		24x36x1	
(mm)	508x610x25				610x762x25		610x914x25	

Continued next page.

PHYSICAL DATA (CONT)

UNIT SIZE	48090	48115	48130	60090	60115	60130
NOMINAL COOLING CAPACITY (ton)	4	4	4	5	5	5
NOMINAL HEATING INPUT (Btu/hr)	90,000	115,000	130,000	90,000	115,000	130,000
SHIPPING WEIGHT (lb)	558	558	558	609	609	609
(kg)	253	253	253	276	276	276
COMPRESSORS	2–Stage Scroll					
Quantity	1					
REFRIGERANT: PURON (R–410A)						
Quantity (lb)	15.3	15.3	15.3	15.8	15.8	15.8
(kg)	6.9	6.9	6.9	7.2	7.2	7.2
REFRIGERANT METERING DEVICE	TXV					
Size	4 Ton	4 Ton	4 Ton	5 Ton	5 Ton	5 Ton
OUTDOOR FAN						
Nominal Cfm	3300	3300	3300	3300	3300	3300
Diameter (in.)	22	22	22	22	22	22
(mm)	559	559	559	559	559	559
Motor Hp (Rpm)	1/4 (1100)	1/4 (1100)	1/4 (1100)	1/3 (1110)	1/3 (1110)	1/3 (1110)
OUTDOOR COIL						
Rows...Fins/in.	2...21	2...21	2...21	2...21	2...21	2...21
Face Area (sq ft)	19.4	19.4	19.4	23.3	23.3	23.3
INDOOR COIL						
Rows...Fins/in.	3...17	3...17	3...17	4...17	4...17	4...17
Face Area (sq ft)	5.7	5.7	5.7	5.7	5.7	5.7
INDOOR FAN						
Nominal Airflow (Cfm)						
Comfort	Variable based on Comfort Roll back (see User Interface instructions for more information).					
Efficiency	1400	1400	1400	1750	1750	1750
Max	1600	1600	1600	2000	2000	2000
Furnace (gas ht.) airflow–Low Stage	815	1215	1255	845	1215	1255
Furnace (gas ht.) airflow–High Stage	1385	1885	1875	1300	1910	1920
Size (in.)	11x10	11x10	11x10	11x10	11x10	11x10
(mm)	279x254	279x254	279x254	279x254	279x254	279x254
Motor HP	3/4	3/4	3/4	1	1	1
FURNACE SECTION*						
Burner Orifice No.						
Natural Gas Qty...Drill Size (Factory Installed)	3...38	3...33	3...31	3...38	3...33	3...31
Propane Gas Qty...Drill Size	3...53	3...51	3...49	3...53	3...51	3...49
HIGH–PRESSURE SWITCH (psig)						
Cut–out	670 ± 10					
Reset (Auto)	470 ± 25					
HIGH–PRESSURE SWITCH 2 (psig)						
(Compressor Solenoid)						
Cut–out	565 ± 15					
Reset (Auto)	455 ± 15					
LOSS–OF–CHARGE /						
LOW–PRESSURE SWITCH						
(Liquid Line) (psig)						
Cut–out	23 ± 5					
Reset (auto)	55 ± 5					
RETURN–AIR FILTERS Throwaway† **(in.)**	24x36x1					
(mm)	610x914x25					

*Based on altitude of 0 to 2000 ft (0 to 610 m).

†Recommended filter sizes for field–installed air filter grilles mounted on the wall or ceiling of the conditioned structure. Required filter sizes shown are based on the larger of the AHRI (Air Conditioning and Refrigeration Institute) rated cooling airflow or the heating airflow velocity of 300 ft/minute for throwaway type or 450 ft/minute for high–capacity type. Air filter pressure drop for non–standard filters must not exceed 0.08 IN. W.C.

A-WEIGHTED SOUND POWER LEVEL (dBA)

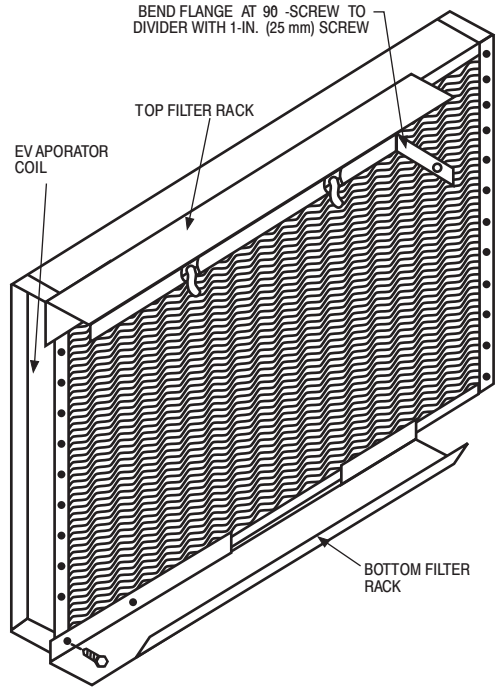
MODEL 577D--A	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA) (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
24	75	58.8	63.5	67.2	66.9	63.7	58.3	50.0
30	75	58.8	63.5	67.2	66.9	63.7	58.3	50.0
36	75	60.7	63.3	66.8	66.5	64.2	60.3	53.0
42	78	56.7	62.8	67.8	67.4	63.7	57.7	50.8
48	78	62.4	69.9	71.3	73.4	70.0	66.3	60.1
60	78	63.5	67.6	71.8	75.5	71.0	68.1	59.9

NOTE: Tested in accordance with AHRI Standard 270 (not listed in AHRI).

OPTIONS AND ACCESSORIES

ITEM	DESCRIPTION	FACTORY INSTALLED OPTION	FIELD INSTALLED ACCESSORY
Coil Options	Base unit with tin plated indoor coil hairpins	X	
Corporate Thermostats	Thermostats provide control for the system heating and cooling functions.		X
Filter Rack	Filter Rack features easy installation, serviceability, and high–filtering performance for vertical applications. Includes 1–in. filter.		X
Flat Roof Curbs	Flat Roof Curbs in both 11–in (279 mm) and 14–in. (356 mm) sizes are available for roof mounted applications.		X
Flue Discharge Deflector	Directs flue gas exhaust 90 degrees upward from current discharge.		X
High Altitude Propane Conversion Kit	High Altitude Propane Conversion Kit is for use at 2001 to 6000 ft. (611–1829 m) above sea level. Kit consists of propane gas orifices that compensate for gas heat operation at high altitude.		X
Manual Outside Air Damper	Manual Outside Air Damper includes hood and filter rack with adjustable damper blade for up to 25% outdoor air.		X
Natural to Propane Gas Conversion Kit	Natural to Propane Gas Conversion Kit allows for conversion from natural gas to propane gas (0–2000 ft) (0–610 m)		X
Propane to Natural Gas Conversion Kit	Propane to Natural Gas Conversion Kit allows for conversion from propane to natural gas for altitudes of 0–2000 ft (0–610 m)		X
Square–to–Round Duct Transition Kit	Square–to–Round Duct Transition Kit enable 24–48 size units to be fitted to 14 in. (356 mm) round ductwork.		X
Curb Adapter	Adapter curb for new unit with base rail installed on existing curb		X
Gasket Kit	For field modified existing roof curb with new base rail unit.		X

FILTER RACK



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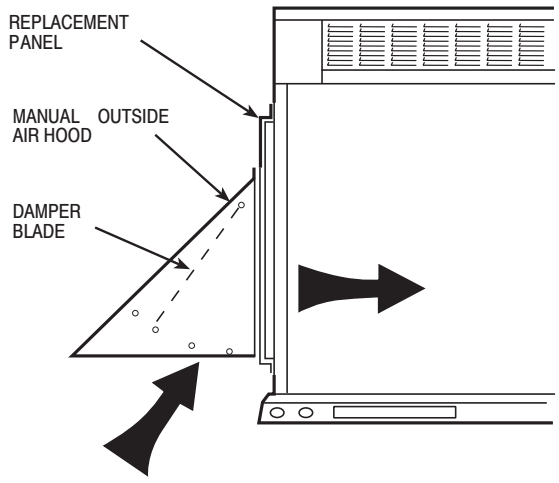
MANUAL OUTSIDE AIR DAMPER



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577D--A24-30 UNIT DIMENSIONS

577D--A

UNIT	ELECTRICAL CHARACTERISTICS	UNIT WT.		UNIT HEIGHT IN/MM	CENTER OF GRAVITY IN/MM		
		LB	KG	"A"	X	Y	Z
577DNWA24040(A/N)A	208/230-1-60	419	189.9	44-3/4 1136.7	22-13/16 579.4	15-5/16 388.9	17-5/8 447.7
577DNWA24060(A/N)A	208/230-1-60	424	192.2	44-3/4 1136.7	22-13/16 579.4	15-5/16 388.9	17-5/8 447.7
577DNWA30040(A/N)A	208/230-1-60	426	193.1	46-3/4 1187.5	22-13/16 579.4	15-5/16 388.9	17-5/8 447.7
577DNWA30060(A/N)A	208/230-1-60	431	195.4	46-3/4 1187.5	22-13/16 579.4	15-5/16 388.9	17-5/8 447.7

UNITS	VOLTAGE	CORNER WEIGHT LB/KG					
		"1"		"2"		"3"	"4"
577DNWA24040(A/N)A	208/230	62.8	28.5	83.8	38.0	125.6 57.0	146.6 66.5
577DNWA24060(A/N)A	208/230	63.6	28.9	84.8	38.5	127.1 57.7	148.3 67.3
577DNWA30040(A/N)A	208/230	63.9	29.0	85.2	38.7	127.7 58.0	149.0 67.7
577DNWA30060(A/N)A	208/230	64.6	29.3	86.2	39.1	129.2 58.7	150.8 68.4

REQUIRED CLEARANCES TO COMBUSTIBLE MATL. INCHES [MM]

TOP OF UNIT	.14 [355.6]
DUCT SIDE OF UNIT	.2 [50.8]
SIDE OPPOSITE DUCTS	.14 [355.6]
BOTTOM OF UNIT	.0 [0.0]
FLUE PANEL	.36 [914.4]

NEC. REQUIRED CLEARANCES. INCHES [MM]

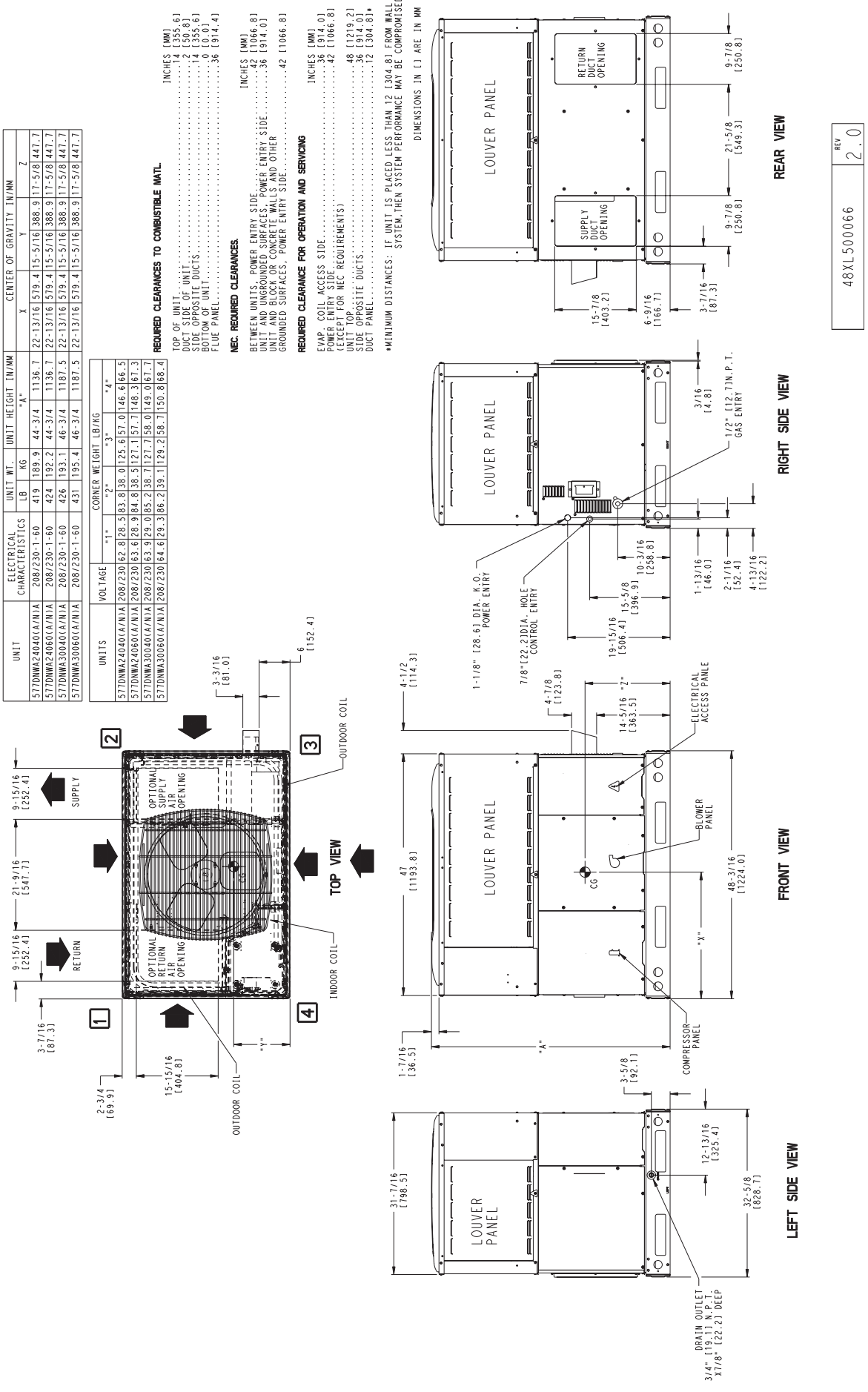
BETWEEN UNITS, POWER ENTRY SIDE	.42 [1066.8]
UNIT AND UNGROUNDED SURFACES, POWER ENTRY SIDE	.36 [914.0]
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, POWER ENTRY SIDE	.42 [1066.8]

REQUIRED CLEARANCE FOR OPERATION AND SERVICING INCHES [MM]

EVAP. COIL ACCESS SIDE	.36 [914.0]
POWER ENTRY SIDE (EXCEPT FOR NEC REQUIREMENTS)	.42 [1066.8]
UNIT TOP	.48 [1219.2]
SIDE OPPOSITE DUCTS	.36 [914.0]
DUCT PANEL	.12 [304.8]*

*MINIMUM DISTANCES: IF UNIT IS PLACED LESS THAN 12 [304.8] FROM WALL, SYSTEM, THEN SYSTEM PERFORMANCE MAY BE COMPROMISED.

DIMENSIONS IN [ ] ARE IN MM



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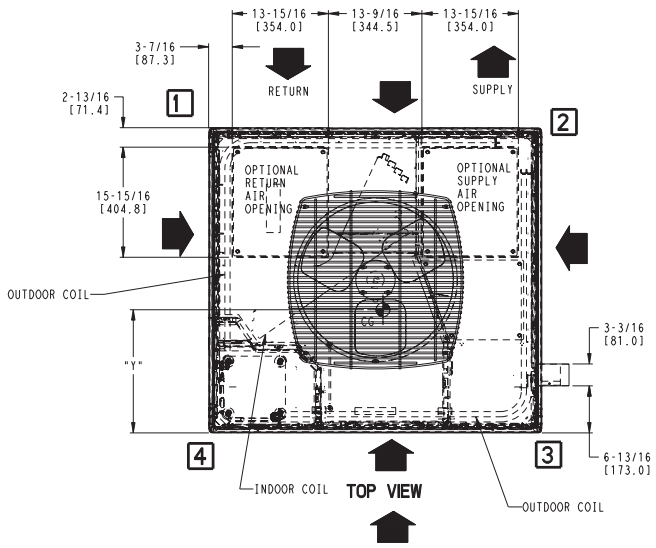
577D--A36-60 UNIT DIMENSIONS



UNIT	ELECTRICAL CHARACTERISTICS	UNIT WT.		UNIT HEIGHT IN/MM		CENTER OF GRAVITY IN/MM					
		LB	KG	"A"		X		Y		Z	
577DNWA36060(A/N)A	208/230-1-60	513	232.8	48-5/8	1235.1	22-13/16	579.4	18	457.2	16-5/8	422.3
577DNWA36090(A/N)A	208/230-1-60	521	236.4	48-5/8	1235.1	22-13/16	579.4	18	457.2	16-5/8	422.3
577DNWA42060(A/N)A	208/230-1-60	535	242.8	50-5/8	1285.9	22-13/16	579.4	18	457.2	16-5/8	422.3
577DNWA42090(A/N)A	208/230-1-60	543	246.4	50-5/8	1285.9	22-13/16	579.4	18	457.2	16-5/8	422.3
577DNWA48090(A/N)A	208/230-1-60	549	249.1	50-5/8	1285.9	22-13/16	579.4	18	457.2	17-5/8	447.7
577DNWA48115(A/N)A	208/230-1-60	549	249.1	50-5/8	1285.9	22-13/16	579.4	18	457.2	17-5/8	447.7
577DNWA48130(A/N)A	208/230-1-60	549	249.1	50-5/8	1285.9	22-13/16	579.4	18	457.2	17-5/8	447.7
577DNWA60090(A/N)A	208/230-1-60	600	272.3	54-5/8	1387.5	22-13/16	579.4	18	457.2	18	457.2
577DNWA60115(A/N)A	208/230-1-60	600	272.3	54-5/8	1387.5	22-13/16	579.4	18	457.2	18	457.2
577DNWA60130(A/N)A	208/230-1-60	600	272.3	54-5/8	1387.5	22-13/16	579.4	18	457.2	18	457.2

UNITS	VOLTAGE	CORNER WEIGHT LB/KG							
		"1"		"2"		"3"		"4"	
577DNWA36060(A/N)A	208/230	77.0	35.0	102.6	46.6	154.0	69.9	179.6	81.6
577DNWA36090(A/N)A	208/230	78.2	35.5	104.2	47.3	156.4	71.0	182.4	82.8
577DNWA42060(A/N)A	208/230	80.3	36.4	107.0	48.6	160.6	72.9	187.3	85.0
577DNWA42090(A/N)A	208/230	81.5	37.0	108.6	49.3	163.0	74.0	190.1	86.3
577DNWA48090(A/N)A	208/230	82.4	37.4	109.8	49.9	164.8	74.8	192.2	87.3
577DNWA48115(A/N)A	208/230	82.4	37.4	109.8	49.9	164.8	74.8	192.2	87.3
577DNWA48130(A/N)A	208/230	82.4	37.4	109.8	49.9	164.8	74.8	192.2	87.3
577DNWA60090(A/N)A	208/230	90.0	40.9	120.0	54.5	180.1	81.8	210.1	95.4
577DNWA60115(A/N)A	208/230	90.0	40.9	120.0	54.5	180.1	81.8	210.1	95.4
577DNWA60130(A/N)A	208/230	90.0	40.9	120.0	54.5	180.1	81.8	210.1	95.4

REQUIRED CLEARANCES TO COMBUSTIBLE MATL.

	INCHES [MM]
TOP OF UNIT	14 [355.6]
DUCT SIDE OF UNIT	2 [50.8]
SIDE OPPOSITE DUCTS	14 [355.6]
BOTTOM OF UNIT	0 [0.0]
FLUE PANEL	36 [914.4]

NEC. REQUIRED CLEARANCES.

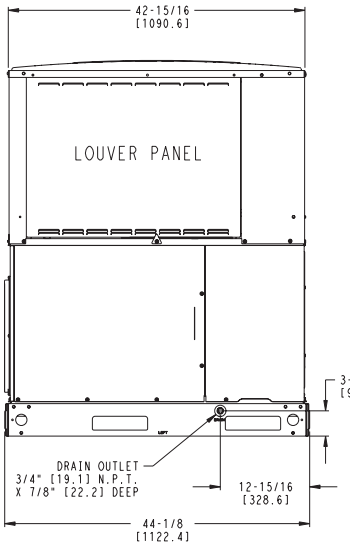
	INCHES [MM]
BETWEEN UNITS, POWER ENTRY SIDE	42 [1066.8]
UNIT AND UNGROUNDED SURFACES, POWER ENTRY SIDE	36 [914.0]
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, POWER ENTRY SIDE	42 [1066.8]

REQUIRED CLEARANCE FOR OPERATION AND SERVICING

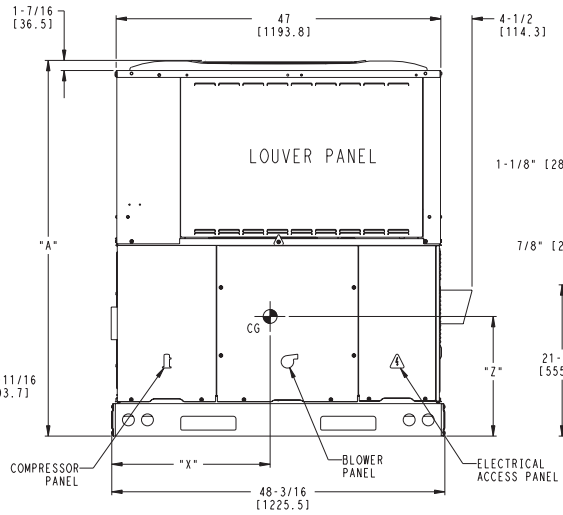
	INCHES [MM]
EVAP. COIL ACCESS SIDE	36 [914.0]
POWER ENTRY SIDE	42 [1066.8]
(EXCEPT FOR NEC REQUIREMENTS)	
UNIT TOP	48 [1219.2]
SIDE OPPOSITE DUCTS	36 [914.0]
DUCT PANEL	12 [304.8]*

*MINIMUM DISTANCES: IF UNIT IS PLACED LESS THAN 12 [304.8] FROM WALL SYSTEM,THEN SYSTEM PERFORMANCE MAY BE COMPROMISED.

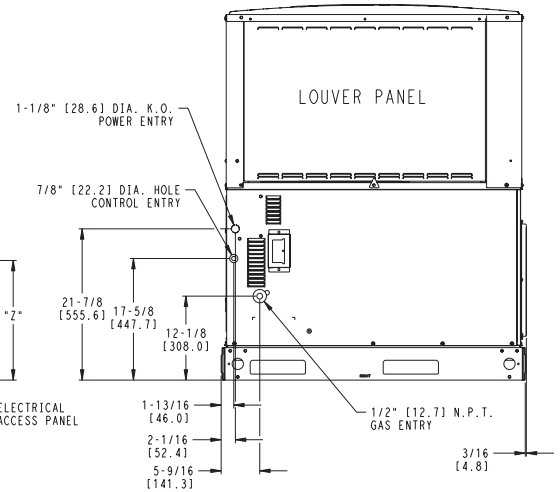
DIMENSIONS IN [] ARE IN MM



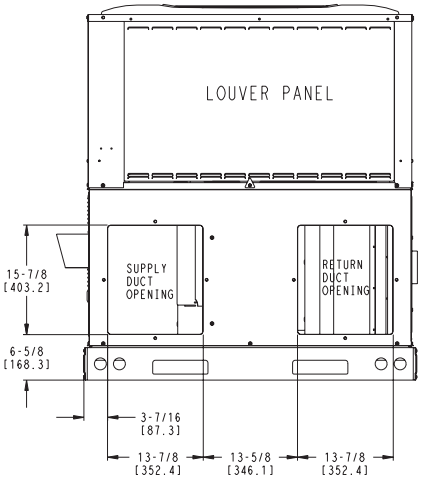
LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW



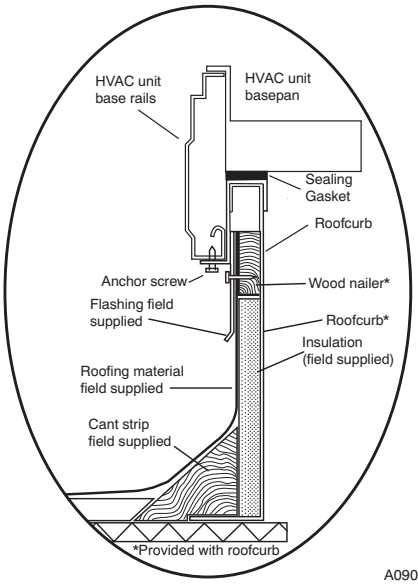
REAR VIEW

48XL500067	REV 2.0

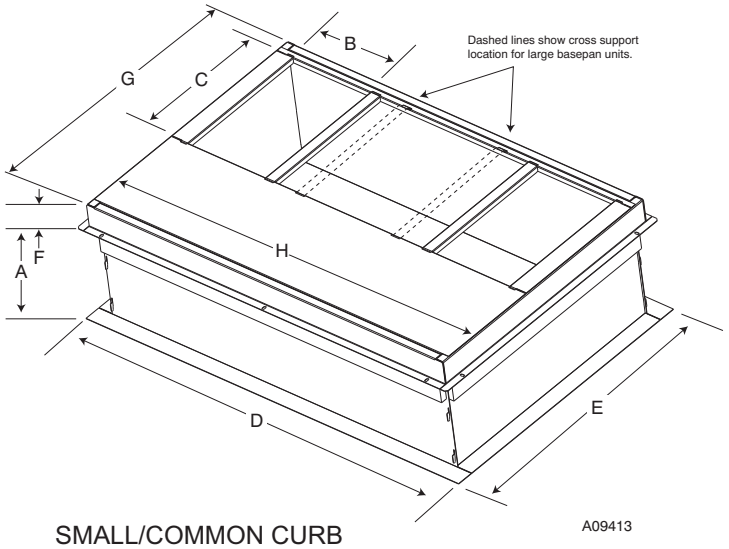
A09557

577D--A

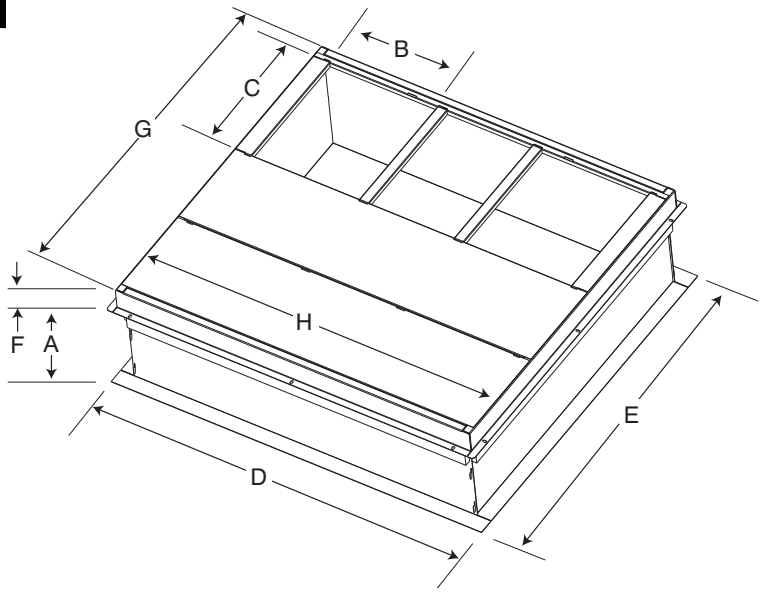
ACCESSORY DIMENSIONS



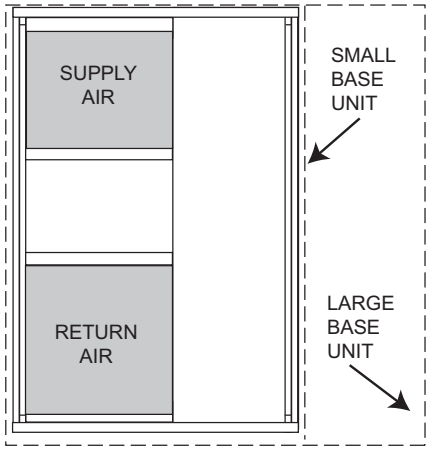
ROOF CURB DETAIL



SMALL/COMMON CURB



LARGE CURB



UNIT PLACEMENT ON COMMON CURB

SMALL OR LARGE BASE UNIT

A09414

UNIT SIZE	CATALOG NUMBER	A IN. (mm)	B (small / common base) IN. (mm)*	B (large base) IN. (mm)*	C IN. (mm)	D IN. (mm)	E IN. (mm)	F IN. (mm)	G IN. (mm)	H IN. (mm)
Small or Large	CPRFCURB010A00	11 (279)	10 (254)	14 (356)	16 (406)	47.8 (1214)	32.4 (822)	2.7 (69)	30.6 (778)	46.1 (1170)
	CPRFCURB011A00	14 (356)								
Large	CPRFCURB012A00	11 (279)	14 (356)				43.9 (1116)		42.2 (1072)	
	CPRFCURB013A00	14 (356)								

NOTES:

1. Roof curb must be set up for unit being installed.
2. Seal strip must be applied, as required, to unit being installed.
3. Roof curb is made of 16-gauge steel.
4. Attach ductwork to curb (flanges of duct rest on curb).
5. Insulated panels: 1-in. (25.4 mm) thick fiberglass 1 lb. density.

SELECTION PROCEDURE

Determine cooling and heating requirements at design conditions:

Given:

REQUIRED COOLING CAPACITY (TC) . . . . . 34,500 BTUH

SENSIBLE HEAT CAPACITY (SHC) . . . . . 42,000 BTUH

REQUIRED HEATING CAPACITY (SHC) . . . . . 42,000 BTUH

CONDENSER ENTERING AIR TEMPERATURE 95°F (35°C)

INDOOR-AIR TEMPERATURE . . . 80°F (26.6°C) EDB, 67°F (19.4°C) EWB

EVAPORATOR AIR QUANTITY . . . . . 1200 CFM

ELECTRICAL CHARACTERISTICS 230-1-60

Select unit based on required cooling capacity

Enter Net Cooling Capacities table at condenser entering temperature of 95°F (35°C). The 36 unit at 1200 CFM and 67°F (19.4°C) ewb (entering wet bulb) will provide a total capacity of 34,600 Btuh and a SHC of 24,200 Btuh. Calculate SHC correction, if required, using Note 4 under Cooling Capacities tables.

Select heating capacity of unit to provide design condition requirement

In the Heating Capacities and Efficiencies table on page 4, note that the unit 36060 will provide 49,000 Btuh of capacity with an input of 60,000 Btuh.

Select unit that corresponds to power source available

The Electrical Data table shows that the unit is designed to operate at 208/230-1-60.

PERFORMANCE DATA-STANDARD ECM INDOOR MOTOR

Cooling Extended Performance Table

577D- -A24 High Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
700	57 (13.9)	21.77	21.77	1.61	20.88	20.88	1.79	19.95	19.95	2.00	18.94	18.94	2.23	17.86	17.86	2.48	16.66	16.66	2.77
	62 (16.7)	22.40	18.69	1.61	21.29	18.21	1.80	20.13	17.70	2.00	18.95	18.95	2.23	17.86	17.86	2.48	16.66	16.66	2.77
	63* (17.2)	22.85	15.18	1.62	21.71	14.70	1.80	20.52	14.21	2.01	19.25	13.70	2.23	17.90	13.16	2.48	16.42	12.58	2.77
	67 (19.4)	24.66	15.72	1.64	23.44	15.24	1.83	22.15	14.75	2.03	20.79	14.24	2.26	19.34	13.70	2.51	17.74	13.12	2.79
	72 (22.2)	27.16	12.75	1.67	25.83	12.28	1.86	24.42	11.80	2.06	22.94	11.29	2.29	21.33	10.76	2.54	19.57	10.18	2.83
800	57 (13.9)	22.76	22.76	1.64	21.81	21.81	1.82	20.81	20.81	2.03	19.74	19.74	2.26	18.58	18.58	2.51	17.29	17.29	2.80
	62 (16.7)	22.97	20.16	1.64	21.84	21.76	1.82	20.81	20.81	2.03	19.74	19.74	2.26	18.58	18.58	2.51	17.29	17.29	2.80
	63* (17.2)	23.39	16.20	1.64	22.19	15.71	1.83	20.94	15.21	2.03	19.62	14.69	2.26	18.22	14.14	2.51	16.69	13.54	2.79
	67 (19.4)	25.22	16.81	1.67	23.94	16.32	1.85	22.60	15.82	2.05	21.18	15.30	2.28	19.67	14.74	2.53	18.01	14.14	2.82
	72 (22.2)	27.77	13.43	1.70	26.37	12.96	1.88	24.90	12.48	2.09	23.35	11.95	2.31	21.66	11.41	2.57	20.60	11.05	2.57

577D- -A24 Low Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
525	57 (13.9)	16.65	16.65	1.05	15.95	15.95	1.20	15.21	15.21	1.37	14.40	14.40	1.57	13.52	13.52	1.80	12.55	12.55	2.07
	62 (16.7)	17.20	14.47	1.06	16.29	14.07	1.21	15.34	13.65	1.37	14.40	14.40	1.57	13.52	13.52	1.80	12.55	12.55	2.07
	63* (17.2)	17.61	11.75	1.06	16.69	11.36	1.21	15.70	10.96	1.38	14.64	10.53	1.57	13.50	10.07	1.80	12.27	9.58	2.06
	67 ()19.4	19.23	12.26	1.08	18.23	11.87	1.22	17.18	11.47	1.39	16.05	11.03	1.58	14.83	10.58	1.81	13.50	10.09	2.07
	72 (22.2)	21.48	10.05	1.09	20.41	9.66	1.24	19.26	9.26	1.41	18.02	8.84	1.60	16.69	8.39	1.83	15.24	7.90	2.09
600	57 (13.9)	17.52	17.52	1.08	16.77	16.77	1.23	15.96	15.96	1.39	15.10	15.10	1.59	14.15	14.15	1.82	13.11	13.11	2.09
	62 (16.7)	17.71	15.66	1.08	16.78	16.75	1.23	15.96	15.96	1.39	15.10	15.10	1.59	14.15	14.15	1.82	13.12	13.12	2.09
	63* (17.2)	18.10	12.58	1.08	17.12	12.18	1.23	16.09	11.76	1.39	14.98	11.32	1.59	13.80	10.85	1.81	12.51	10.35	2.08
	67 (19.4)	19.75	13.14	1.09	18.71	12.74	1.24	17.60	12.32	1.41	16.41	11.88	1.60	15.14	11.41	1.83	13.76	10.91	2.09
	72 (22.2)	22.06	10.61	1.11	20.93	10.21	1.26	19.72	9.80	1.43	18.41	9.36	1.62	17.03	8.91	1.85	15.51	8.41	2.11

See page 18 for cooling notes.

PERFORMANCE DATA-STANDARD ECM INDOOR MOTOR

Cooling Extended Performance Table

577D--A30 High Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
875	57 (13.9)	27.90	27.90	2.05	26.73	26.73	2.27	25.47	25.47	2.52	24.09	24.09	2.79	22.56	22.56	3.10	20.81	20.81	3.44
	62 (16.7)	28.72	23.85	2.06	27.25	23.21	2.28	25.70	22.53	2.52	24.09	24.09	2.79	22.56	22.56	3.10	20.81	20.81	3.44
	63* (17.2)	29.28	19.34	2.07	27.78	18.72	2.29	26.18	18.07	2.53	24.46	17.38	2.80	22.58	16.64	3.10	20.50	15.82	3.43
	67 (19.4)	31.48	19.99	2.10	29.85	19.36	2.32	28.11	18.70	2.56	26.23	18.00	2.83	24.19	17.25	3.13	21.92	16.42	3.47
	72 (22.2)	34.49	16.13	2.14	32.69	15.50	2.36	30.77	14.85	2.61	28.70	14.15	2.88	26.43	13.40	3.18	26.31	13.36	3.19
1000	57 (13.9)	29.10	29.10	2.09	27.84	27.84	2.32	26.48	26.48	2.56	25.00	25.00	2.84	23.34	23.34	3.15	21.47	21.47	3.49
	62 (16.7)	29.40	25.68	2.10	27.90	27.75	2.32	26.48	26.48	2.56	25.00	25.00	2.84	23.34	23.34	3.15	21.47	21.47	3.49
	63* (17.2)	29.91	20.61	2.10	28.33	19.98	2.32	26.66	19.31	2.57	24.86	18.60	2.83	22.90	17.84	3.13	20.75	17.00	3.47
	67 (19.4)	32.13	21.34	2.14	30.42	20.69	2.36	28.60	20.02	2.60	26.64	19.30	2.87	24.51	18.53	3.17	22.47	16.98	3.51
	72 (22.2)	35.18	16.96	2.18	33.29	16.32	2.40	31.27	15.65	2.65	29.11	14.94	2.92	26.76	14.18	3.22	24.19	13.36	3.55

577D--A30 Low Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
615	57 (13.9)	20.32	20.32	1.29	19.50	19.50	1.48	18.60	18.60	1.70	17.60	17.60	1.95	16.20	16.20	2.21	15.23	15.23	2.58
	62 (16.7)	21.08	17.65	1.30	20.01	17.18	1.49	18.86	16.67	1.70	17.62	17.58	1.95	16.49	16.49	2.24	15.23	15.23	2.58
	63* (17.2)	21.55	14.40	1.30	20.47	13.94	1.49	19.28	13.44	1.70	17.99	12.90	1.95	16.58	12.33	2.24	15.02	11.71	2.58
	67 (19.4)	23.40	14.96	1.32	22.22	14.49	1.51	20.93	13.99	1.72	19.51	13.44	1.97	17.97	12.85	2.26	16.26	12.24	2.60
	72 (22.2)	25.95	12.26	1.35	24.65	11.79	1.53	23.20	11.28	1.75	21.63	10.73	2.00	19.91	10.14	2.28	18.01	9.51	2.62
700	57 (13.9)	21.32	21.32	1.31	20.44	20.44	1.50	19.46	19.46	1.72	18.38	18.38	1.97	17.17	17.17	2.26	15.82	15.82	2.60
	62 (16.7)	21.67	19.04	1.31	20.56	18.54	1.50	19.46	19.46	1.72	18.38	18.38	1.97	17.17	17.17	2.26	15.82	15.82	2.60
	63* (17.2)	22.13	15.36	1.32	20.98	14.89	1.51	19.74	14.38	1.72	18.38	13.83	1.97	16.90	13.24	2.26	15.28	12.60	2.60
	67 (19.4)	24.00	15.98	1.34	22.76	15.50	1.53	21.40	14.98	1.74	19.91	14.42	1.99	18.29	13.82	2.28	16.52	13.17	2.61
	72 (22.2)	26.61	12.91	1.36	25.22	12.42	1.55	23.71	11.90	1.76	22.06	11.34	2.01	20.25	10.74	2.30	18.28	10.09	2.63

See page 18 for cooling notes.

PERFORMANCE DATA-STANDARD ECM INDOOR MOTOR

Cooling Extended Performance Table

577D- -A36 High Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
1050	57 (13.9)	33.64	33.64	2.28	32.32	32.32	2.53	30.90	30.90	2.81	29.36	29.36	3.11	27.65	27.65	3.46	25.71	25.71	3.84
	62 (16.7)	34.47	28.72	2.29	32.83	28.00	2.54	31.11	27.24	2.81	29.36	29.36	3.11	27.65	27.65	3.46	25.71	25.71	3.84
	63* (17.2)	35.12	23.25	2.29	33.44	22.56	2.54	31.65	21.83	2.81	29.73	21.07	3.12	27.64	20.25	3.45	25.33	19.35	3.83
	67 (19.4)	37.76	24.04	2.32	35.94	23.34	2.57	34.00	22.61	2.84	31.91	21.83	3.15	29.65	21.00	3.49	27.14	20.10	3.87
	72 (22.2)	42.16	18.41	2.37	40.12	17.73	2.62	37.93	17.01	2.90	35.58	16.24	3.20	33.02	15.43	3.54	30.21	14.53	3.92
1200	57 (13.9)	35.06	35.06	2.32	33.64	33.64	2.58	32.12	32.12	2.85	30.46	30.46	3.16	28.63	28.63	3.50	26.56	26.56	3.89
	62 (16.7)	35.29	30.91	2.33	33.64	33.64	2.58	32.12	32.12	2.85	30.46	30.46	3.16	28.63	28.63	3.50	26.56	26.56	3.89
	63* (17.2)	35.86	24.79	2.33	34.09	24.08	2.58	32.22	23.34	2.85	30.23	22.56	3.15	28.05	21.71	3.49	25.66	20.78	3.87
	67 (19.4)	38.52	25.68	2.36	36.62	24.97	2.61	34.60	24.22	2.88	32.43	23.43	3.19	30.06	22.57	3.53	27.47	21.64	3.90
	72 (22.2)	42.99	19.31	2.41	40.85	18.61	2.66	38.57	17.87	2.93	36.13	17.09	3.24	33.48	16.25	3.58	30.56	15.35	3.96

577D- -A36 Low Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
745	57 (13.9)	23.27	23.27	1.46	22.34	22.34	1.65	21.31	21.31	1.87	20.19	20.19	2.12	18.95	18.95	2.41	17.58	17.58	2.76
	62 (16.7)	23.91	20.06	1.46	22.70	19.54	1.65	21.41	18.97	1.87	20.19	20.19	2.12	18.95	18.95	2.41	17.58	17.58	2.76
	63* (17.2)	24.46	16.28	1.47	23.21	15.77	1.66	21.87	15.23	1.87	20.42	14.65	2.12	18.85	14.03	2.41	17.14	13.36	2.75
	67 (19.4)	26.63	16.96	1.48	25.29	16.45	1.67	23.85	15.90	1.89	22.28	15.32	2.14	20.58	14.69	2.43	18.72	14.02	2.77
	72 (22.2)	29.67	13.86	1.51	28.20	13.35	1.70	26.61	12.81	1.91	24.89	12.23	2.16	23.01	11.60	2.45	20.96	10.93	2.79
850	57 (13.9)	24.45	24.45	1.48	23.43	23.43	1.67	22.33	22.33	1.89	21.11	21.11	2.14	19.80	19.80	2.44	18.32	18.32	2.78
	62 (16.7)	24.61	21.68	1.48	23.43	23.43	1.67	22.33	22.33	1.89	21.12	21.12	2.14	19.80	19.80	2.44	18.32	18.32	2.78
	63* (17.2)	25.11	17.42	1.49	23.80	16.89	1.68	22.39	16.34	1.89	20.88	15.74	2.14	19.24	15.10	2.43	17.46	14.42	2.77
	67 (19.4)	27.33	18.17	1.50	25.92	17.64	1.69	24.40	17.08	1.91	22.76	16.48	2.15	20.99	15.84	2.44	19.06	15.15	2.78
	72 (22.2)	30.44	14.64	1.53	28.89	14.12	1.71	27.21	13.55	1.93	25.40	12.96	2.17	23.45	12.33	2.46	21.30	11.65	2.80

See page 18 for cooling notes.

PERFORMANCE DATA-STANDARD ECM INDOOR MOTOR

Cooling Extended Performance Table

577D--A42 High Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
1225	57 (13.9)	40.34	40.34	2.76	38.56	38.56	3.03	36.60	36.60	3.32	35.21	35.21	3.58	32.79	32.79	3.93	29.04	29.04	4.37
	62 (16.7)	41.24	37.05	2.77	39.06	36.02	3.04	36.71	36.39	3.33	35.21	35.21	3.57	32.79	32.79	3.93	29.04	29.04	4.37
	63* (17.2)	42.00	29.94	2.78	39.74	28.96	3.05	37.29	27.90	3.34	35.56	27.16	3.58	32.52	25.89	3.92	28.29	24.13	4.35
	67 (19.4)	45.04	30.93	2.84	42.59	29.93	3.10	39.90	28.85	3.39	38.03	28.11	3.63	34.81	26.85	3.98	30.12	25.04	4.40
	72 (22.2)	49.21	24.77	2.91	46.48	23.77	3.17	43.50	22.69	3.46	44.33	22.99	3.52	41.24	21.88	3.87	32.75	18.96	4.47
1400	57 (13.9)	41.96	41.96	2.82	40.04	40.04	3.10	37.92	37.92	3.39	36.46	36.46	3.64	33.86	33.86	4.00	29.82	29.82	4.43
	62 (16.7)	42.17	39.80	2.83	40.04	40.04	3.10	37.92	37.92	3.39	36.46	36.46	3.64	33.86	33.86	4.00	29.82	29.82	4.43
	63* (17.2)	42.81	31.90	2.84	40.45	30.89	3.10	37.88	29.81	3.39	36.05	29.03	3.63	31.99	27.35	4.03	28.59	25.92	4.40
	67 (19.4)	45.87	33.01	2.89	43.30	31.98	3.15	40.50	30.88	3.44	38.65	30.16	3.69	35.36	28.88	4.03	30.38	26.96	4.45
	72 (22.2)	50.09	26.04	2.96	47.23	25.02	3.23	44.13	23.92	3.51	45.09	24.26	3.58	41.83	23.12	3.93	32.98	20.13	4.51

577D--A42 Low Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
855	57 (13.9)	28.20	28.20	1.89	27.00	27.00	2.11	25.67	25.67	2.35	24.16	24.16	2.63	22.43	22.43	2.94	20.50	20.50	3.29
	62 (16.7)	28.99	24.09	1.89	27.46	23.43	2.11	26.46	22.99	2.31	24.16	24.16	2.63	22.43	22.43	2.94	20.48	20.48	3.29
	63* (17.2)	29.61	19.56	1.89	28.04	18.92	2.11	26.32	18.23	2.35	24.41	17.47	2.63	22.29	16.64	2.95	19.93	15.73	3.30
	67 (19.4)	32.05	20.31	1.89	30.33	19.65	2.11	28.43	18.94	2.35	26.33	18.16	2.62	23.99	17.30	2.92	21.52	16.42	3.28
	72 (22.2)	35.41	16.51	1.89	33.47	15.84	2.10	31.36	15.12	2.34	31.76	15.26	2.28	26.40	13.49	2.90	24.07	12.74	3.25
975	57 (13.9)	29.53	29.53	1.90	28.23	28.23	2.12	26.78	26.78	2.36	25.14	25.14	2.64	23.27	23.27	2.95	21.29	21.29	3.29
	62 (16.7)	29.77	25.99	1.90	28.23	28.23	2.12	26.78	26.78	2.36	25.14	25.14	2.64	23.27	23.27	2.95	21.29	21.29	3.29
	63* (17.2)	30.34	20.89	1.90	28.69	20.23	2.12	26.88	19.52	2.37	24.87	18.73	2.64	22.66	17.88	2.96	20.20	16.93	3.31
	67 (19.4)	32.81	21.71	1.91	31.00	21.04	2.12	29.00	20.30	2.36	28.00	19.93	2.59	24.36	18.62	2.93	21.97	17.76	3.29
	72 (22.2)	36.21	17.40	1.91	34.17	16.72	2.12	31.95	16.00	2.35	31.03	15.68	2.58	30.23	15.42	2.60	24.42	13.57	3.26

See page 18 for cooling notes.

PERFORMANCE DATA-STANDARD ECM INDOOR MOTOR

Cooling Extended Performance Table

577D- -A48 High Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
1400	57 (13.9)	44.39	44.39	3.40	42.70	42.70	3.71	40.87	40.87	4.05	38.88	38.88	4.43	36.67	36.67	4.84	34.16	34.16	5.30
	62 (16.7)	45.43	38.20	3.41	43.33	37.29	3.72	41.11	36.31	4.05	38.87	38.87	4.43	36.67	36.67	4.84	35.30	35.30	4.84
	63* (17.2)	46.29	30.85	3.42	44.11	29.95	3.73	41.79	29.00	4.06	39.28	28.00	4.43	36.54	26.91	4.84	33.51	25.73	5.29
	67 (19.4)	50.04	32.01	3.46	47.71	31.11	3.77	45.21	30.16	4.11	42.50	29.14	4.48	41.00	28.60	4.43	36.24	26.85	5.34
	72 (22.2)	55.24	25.88	3.53	52.68	24.98	3.84	49.93	24.04	4.18	46.96	23.04	4.55	45.43	22.53	4.52	40.04	20.75	5.41
1600	57 (13.9)	46.32	46.32	3.48	44.10	44.10	3.79	42.54	42.54	4.13	40.41	40.41	4.51	38.04	38.04	4.92	36.62	36.62	4.93
	62 (16.7)	46.57	41.09	3.48	44.43	44.43	3.79	42.54	42.54	4.13	41.40	41.40	4.51	38.04	38.04	4.92	36.61	36.61	4.93
	63* (17.2)	47.25	32.81	3.49	44.97	31.89	3.80	42.55	30.92	4.13	39.95	29.90	4.50	37.11	28.80	4.91	33.97	27.59	5.36
	67 (19.4)	51.07	34.10	3.53	48.62	33.18	3.84	46.00	32.20	4.18	43.19	31.17	4.55	40.12	30.06	4.96	38.36	29.43	4.97
	72 (22.2)	56.36	27.17	3.60	53.67	26.25	3.91	50.80	25.29	4.25	47.69	24.26	4.62	44.30	23.15	5.03	42.55	22.59	5.06

577D- -A48 Low Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
965	57 (13.9)	31.49	31.49	2.22	30.30	30.30	2.49	29.02	29.02	2.78	27.63	27.63	3.12	26.10	26.10	3.51	24.40	24.40	3.96
	62 (16.7)	32.49	27.41	2.21	30.96	26.74	2.48	29.34	26.03	2.78	27.64	27.57	3.12	26.10	26.10	3.51	24.40	24.40	3.97
	63* (17.2)	33.19	22.28	2.21	31.62	21.62	2.48	29.95	20.92	2.78	28.14	20.18	3.12	26.19	19.39	3.52	24.04	18.53	3.97
	67 (19.4)	36.14	23.21	2.21	34.45	22.54	2.47	32.65	21.84	2.77	30.72	21.10	3.10	28.62	20.30	3.49	26.31	19.44	3.94
	72 (22.2)	40.19	19.02	2.21	38.34	18.36	2.46	36.37	17.67	2.75	34.25	16.93	3.08	31.95	16.14	3.46	29.40	15.29	3.90
1100	57 (13.9)	33.04	33.04	2.24	31.76	31.76	2.50	30.39	30.39	2.80	28.90	28.90	3.13	27.27	27.27	3.52	25.45	25.45	3.97
	62 (16.7)	33.42	29.57	2.23	31.85	28.86	2.50	30.39	30.39	2.80	28.90	28.90	3.13	27.27	27.27	3.52	25.45	25.45	3.97
	63* (17.2)	34.05	23.76	2.23	32.40	23.08	2.50	30.64	22.37	2.80	28.77	21.61	3.14	26.73	20.81	3.53	24.50	19.92	3.99
	67 (19.4)	37.06	24.78	2.23	35.29	24.10	2.49	33.40	23.38	2.78	31.39	22.62	3.12	29.20	21.81	3.51	26.79	20.93	3.95
	72 (22.2)	41.21	20.03	2.23	39.26	19.35	2.48	37.19	18.64	2.77	34.96	17.88	3.10	32.54	17.07	3.48	29.89	16.19	3.92

See page 18 for cooling notes.

PERFORMANCE DATA-STANDARD ECM INDOOR MOTOR

Cooling Extended Performance Table

577D--A60 High Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
2000	57 (13.9)	58.24	58.24	4.41	55.10	55.10	4.84	54.80	54.80	4.69	52.40	52.40	5.23	46.70	46.70	6.40	42.90	42.90	7.02
	62 (16.7)	58.46	54.46	4.42	55.79	55.79	4.84	55.36	55.36	4.69	52.73	52.73	5.23	46.94	46.94	6.40	43.20	43.20	7.02
	63* (17.2)	59.23	43.33	4.42	56.27	42.07	4.85	55.68	41.83	4.69	52.48	40.49	5.22	45.80	37.74	6.37	41.56	36.02	6.97
	67 (19.4)	63.56	44.86	4.50	60.35	43.59	4.92	56.88	42.24	5.38	56.62	42.14	5.33	48.97	39.21	6.44	44.37	37.49	7.05
	72 (22.2)	69.55	35.33	4.59	66.01	34.07	5.02	62.20	32.73	5.48	58.07	31.30	5.99	53.51	29.74	6.54	48.46	28.03	7.15
1750	57 (13.9)	56.01	56.01	4.29	53.76	53.76	4.72	51.30	51.30	5.19	50.80	50.80	5.08	45.20	45.20	6.27	41.70	41.70	6.89
	62 (16.7)	57.19	50.62	4.31	54.45	49.37	4.73	51.51	48.01	5.19	50.93	47.74	5.08	45.50	45.50	6.27	41.99	41.99	6.89
	63* (17.2)	58.18	40.75	4.32	55.35	39.51	4.74	52.28	38.20	5.20	51.66	37.95	5.10	45.27	35.27	6.26	41.16	33.59	6.87
	67 (19.4)	62.48	42.11	4.39	59.41	40.86	4.81	57.00	39.90	5.18	55.71	39.39	5.21	48.47	36.58	6.34	44.00	34.88	6.94
	72 (22.2)	68.41	33.69	4.48	65.01	32.46	4.91	61.35	31.14	5.37	57.37	29.72	5.88	52.97	28.19	6.44	48.09	26.53	7.04

577D--A60 Low Cool

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (23.8)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.6)		
CFM	EWB °F (°C)	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW	Capacity MBtuh		Total System KW
		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens	
1200	57 (13.9)	39.88	39.88	2.70	38.34	38.34	3.04	36.64	36.64	3.43	34.74	34.74	3.87	31.90	31.90	4.37	29.70	29.70	4.94
	62 (16.7)	40.94	35.96	2.69	39.01	35.09	3.04	36.90	34.14	3.43	34.90	34.90	3.87	32.60	32.60	4.37	30.16	30.16	4.94
	63* (17.2)	41.76	29.14	2.69	39.78	28.27	3.04	37.61	27.34	3.42	35.23	26.33	3.87	32.61	25.22	4.37	29.69	24.04	4.96
	67 (19.4)	45.04	30.17	2.68	42.87	29.29	3.02	40.50	28.35	3.40	37.91	27.31	3.84	35.04	26.21	4.33	31.84	25.00	4.90
	72 (22.2)	49.59	24.40	2.68	47.18	23.52	3.01	44.52	22.56	3.38	41.68	21.55	3.80	38.47	20.43	4.28	34.93	19.21	4.84
1370	57 (13.9)	41.69	41.69	2.72	40.00	40.00	3.07	37.90	37.90	3.45	35.45	35.45	3.89	33.62	33.62	4.38	30.90	30.90	4.95
	62 (16.7)	41.98	38.83	2.72	40.02	40.02	3.07	38.18	38.18	3.45	36.13	36.13	3.89	33.82	33.82	4.38	31.19	31.19	4.95
	63* (17.2)	42.72	31.09	2.72	40.63	30.20	3.07	38.35	29.24	3.45	35.86	28.21	3.89	33.13	27.09	4.40	30.10	25.87	4.98
	67 (19.4)	46.03	32.23	2.72	43.75	31.34	3.05	41.27	30.36	3.43	38.55	29.32	3.86	35.56	28.18	4.36	32.25	26.93	4.92
	72 (22.2)	50.62	25.68	2.71	48.09	24.78	3.04	45.37	23.83	3.41	42.32	22.77	3.83	39.01	21.64	4.31	35.34	20.40	4.86

See page 18 for cooling notes.

PERFORMANCE DATA (CONT)

LEGEND
BF— Bypass Factor
edb— Entering Dry–Bulb
Ewb — Entering Wet–Bulb
kW — Total Unit Power Input
ldb— Leaving Dry–Bulb
lwb— Leaving Wet–Bulb
SHC — Sensible Heat Capacity (1000 Btuh)
TC — Total Capacity (1000 Btuh) (net)
ECM — Electronic Computated Motor

*At 75°F (23.85C) entering dry bulb (Tennessee Valley Authority [TVA] rating conditions); all other at 80°F (26.6°C) entering dry bulb.

NOTES:
1. Ratings are net; they account for the effects of the evaporator–fan motor power and heat.
2. Direct interpolation is permissible. Do not extrapolate.
3. The following formulas may be used:

$$^{t}ldb = {}^{t}edb - \frac{\text{Sensible capacity (Btuh)}}{1.10 \times cfm}$$

$$^{t}lwb = \text{Wet–bulb temperature corresponding to enthalpy air leaving evaporator coil } (^{h}lwb)$$

$$^{h}lwb = {}^{h}ewb - \frac{\text{total capacity (Btuh)}}{4.5 \times cfm}$$

Where: ^{h}ewb = Enthalpy of air entering evaporator coil

4. The SHC is based on 80°F (26.65C) edb temperature of air entering evaporator coil. Below 80°F (26.6°C) edb, subtract (corr factor x cfm) from SHC.
Above 80°F (26.6°C) edb, add (corr factor x cfm) to SHC.
Correction Factor = 1.10 x (1 + BF) x (edb – 80).

Natural Gas Orifice Sizes and Manifold Pressure (in. W.C.)

Nameplate Input, High Stage (Btu/hr)		ALTITUDE OF INSTALLATION (FT. [m] ABOVE SEA LEVEL) U.S.A.*				
		0 to 2000 [0 to 610]	2001 to 3000* [610 to 914]	3001 to 4000 [915 to 1219]	4001 to 5000 [1220 to 1524]	5001 to 6000 [1524 to 1829]
40000	Orifice No. (Qty)	44 (2)	45 (2)†	48 (2)†	48 (2)†	48 (2)†
	Manifold Press. High / Low	3.2 /1.4	3.2 /1.4	3.8 /1.6	3.5 /1.5	3.2 /1.4
60000	Orifice No. (Qty)	44 (3)	45 (3)†	48 (3)†	48 (3)†	48 (3)†
	Manifold Press. High / Low	3.2 /1.4	3.2 /1.4	3.8 /1.6	3.5 /1.5	3.2 /1.4
90000	Orifice No. (Qty)	38 (3)	41 (3)†	41 (3)†	42 (3)†	42 (3)†
	Manifold Press. High / Low	3.6 /1.6	3.8 /1.6	3.4 /1.5	3.4 /1.5	3.2 /1.4
115000	Orifice No. (Qty)	33 (3)	36 (3)†	36 (3)†	36 (3)†	38 (3)†
	Manifold Press. High / Low	3.8 /1.7	3.8 /1.7	3.6 /1.6	3.3 /1.4	3.6 /1.5
130000	Orifice No. (Qty)	31 (3)	31 (3)	33 (3)†	33 (3)†	34 (3)†
	Manifold Press. High / Low	3.8 /1.7	3.2 /1.4	3.7 /1.6	3.4 /1.4	3.3 /1.4

*In the U.S.A., the input rating for altitudes above 2000 ft (610m) must be reduced by 4% for each 1000 ft (305 m) above Sea level.
In Canada, the input rating for altitudes from 2001 to 4500 ft (611 to 1372 m) above sea level must be derated by 10% by an authorized gas conversion station or dealer.
For Canadian Installations from 2000 to 4500 ft (611 to 1372 m), use U.S.A. column 2001 to 3000 ft (610 to 914 m).
† Orifices available through your distributor.
NOTE: Orifice sizes and manifold pressure settings are based on natural gas with a heating value of 1025 Btu/ft^3 and a specific gravity of .6.

Propane Gas Orifice Sizes and Manifold Pressure (in. W.C.)

Nameplate Input, High Stage (Btu/hr)		ALTITUDE OF INSTALLATION (FT. [m] ABOVE SEA LEVEL) U.S.A.*†				
		0 to 2000 [0 to 610]	2001 to 3000* [610 to 914]	3001 to 4000 [915 to 1219]	4001 to 5000 [1220 to 1524]	5001 to 6000 [1524 to 1829]
40000	Orifice No. (Qty)	55 (2)	56 (2)	56 (2)	56 (2)	56 (2)
	Manifold Press. High / Low	10.0/5.0	11.0/6.0	11.0/5.5	11.0/5.0	10.7/4.8
60000	Orifice No. (Qty)	55 (2)	56 (2)	56 (2)	56 (2)	56 (2)
	Manifold Press. High / Low	10.0/5.0	11.0/6.0	11.0/5.5	11.0/5.0	10.7/4.8
90000	Orifice No. (Qty)	53 (3)	54 (3)	54 (3)	54 (3)	54 (3)
	Manifold Press. High / Low	10.0/5.4	11.0/6.4	11.0/5.9	11.0/5.4	11.0/5.0
115000	Orifice No. (Qty)	51 (3)	52 (3)	52 (3)	53 (3)	53 (3)
	Manifold Press. High / Low	10.0/5.4	11.0/5.0	10.6/4.8	11.0/6.1	11.0/5.5
130000	Orifice No. (Qty)	49 (3)	50 (3)	51 (3)	52 (3)	52 (3)
	Manifold Press. High / Low	10.0/5.4	11.0/4.8	11.0/4.9	11.0/5.2	11.0/5.0

*In the U.S.A., the input rating for altitudes above 2000 ft (610m) must be reduced by 4% for each 1000 ft (305 m) above Sea level.
In Canada, the input rating for altitudes from 2001 to 4500 ft (611 to 1372 m) above sea level must be derated by 10% by an authorized gas conversion station or dealer.
For Canadian Installations from 2000 to 4500 ft (611 to 1372 m), use U.S.A. column 2001 to 3000 ft (610 to 914 m).
† Use Kit No. CPLPCONV013A00 (0–2000 ft [0–610 m] above sea level. Use Kit No. CPLPCONV014A00 (2001–6000 ft [611–1829 m] above sea level.

PERFORMANCE DATA (CONT)

High Altitude Compensation: Natural Gas

Nameplate Input, High Stage (Btu/hr)	Rated Heating Input (Btu/hr), Natural Gas at Installation Altitude Above Sea Level, U.S.A.*									
	0 to 2000 ft 0 to 610 m		2001 to 3000 ft* 610 to 914 m		3001 to 4000 ft 915 to 1219 m		4001 to 5000 ft 1220 to 1524 m		5001 to 6000 ft 1524 to 1829 m	
	High Stage	Low Stage	High Stage	Low Stage	High Stage	Low Stage	High Stage	Low Stage	High Stage	Low Stage
40000	40000	26000	36000	23400	34400	22300	32800	21300	31200	20300
60000	60000	39000	54000	35100	51600	33500	49200	32000	46800	30400
90000	90000	58500	81000	52700	77400	50300	73800	48000	70200	45600
115000	115000	75000	103500	67500	98900	64500	94300	61500	89700	58500
130000	130000	84500	117000	76100	111800	72700	106600	69300	101400	65900

*In the U.S.A., the input rating for altitudes above 2000 ft (610 m) must be reduced by 4% for each 1000 ft (305 m) above sea level.
In Canada, the input rating for altitudes from 2001 to 4500 (611 to 1372 m) above sea level must be derated by 10% by an authorized gas conversion station or dealer.
For Canadian Installations from 2000 to 4500 ft (610 to 1372 m), use U.S.A. column 2001 to 3000 ft (610 to 914 m).

High Altitude Compensation: Propane Gas

Nameplate Input, High Stage (Btu/hr)	Rated Heating Input (Btu/hr), Propane Gas at Installation Altitude Above Sea Level, U.S.A.*									
	0 to 2000 ft 0 to 610 m		2001 to 3000 ft* 610 to 914 m		3001 to 4000 ft 915 to 1219 m		4001 to 5000 ft 1220 to 1524 m		5001 to 6000 ft 1524 to 1829 m	
	High Stage	Low Stage	High Stage	Low Stage	High Stage	Low Stage	High Stage	Low Stage	High Stage	Low Stage
40000	38000	26000	31700	23400	31700	22300	31700	21300	31200	20300
60000	57000	39000	47500	35100	47500	33500	47500	32000	46800	30400
90000	79000	58500	68900	52700	68900	50300	68600	48000	68600	45600
115000	103000	75000	100400	67500	98900	64500	83000	61500	83000	58500
130000	116000	84500	115500	76100	111800	72700	101300	69300	100400	65900

*In the U.S.A., the input rating for altitudes above 2000 ft (610 m) must be reduced by 4% for each 1000 ft (305 m) above sea level.
In Canada, the input rating for altitudes from 2001 to 4500 (611 to 1372 m) above sea level must be derated by 10% by an authorized gas conversion station or dealer.
For Canadian Installations from 2000 to 4500 ft (610 to 1372 m), use U.S.A. column 2001 to 3000 ft (610 to 914 m).

PERFORMANCE DATA (CONT)

Wet/Dry Coil Air Delivery (CFM)- Low Stage

208/230 VOLT										
UNIT SIZE	SYSTEM SETTING	EXTERNAL STATIC PRESSURE (IN. W.C.)								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
24	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	525	525	525	525	525	525	525	525	525	525
	MAX	600	600	600	600	600	600	600	600	600	600
30	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	613	613	613	613	613	613	613	613	613	613
	MAX	700	700	700	700	700	700	700	700	700	700
36	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	743	743	743	743	743	743	743	743	743	743
	MAX	850	850	850	850	850	850	850	850	850	850
42	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	853	853	853	853	853	853	853	853	853	853
	MAX	975	975	975	975	975	975	975	975	975	975
48	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	963	963	963	963	963	963	963	963	963	963
	MAX	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
60	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
	MAX	1372	1372	1372	1372	1372	1372	1372	1372	1372	1372

Wet/Dry Coil Air Delivery (CFM)- High Stage

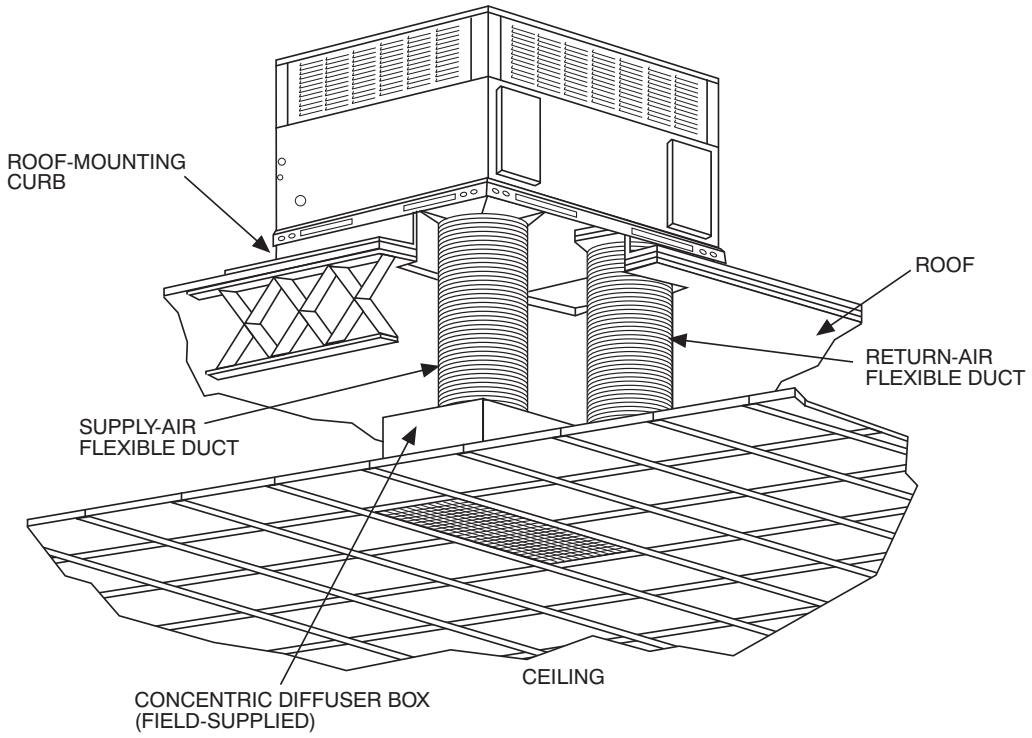
208/230 VOLT										
UNIT SIZE	SYSTEM SETTING	EXTERNAL STATIC PRESSURE IN. W.C.)								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
24	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	700	700	700	700	700	700	700	700	700	700
	MAX	800	800	800	800	800	800	800	800	800	800
30	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	875	875	875	875	875	875	875	875	875	875
	MAX	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
36	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
	MAX	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
42	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	1225	1225	1225	1225	1225	1225	1225	1225	1225	1225
	MAX	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
48	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
	MAX	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
60	COMFORT (Default)	Variable based on Comfort Settings									
	EFFICIENCY	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
	MAX	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

Air delivery values are based on operating voltage of 230v, and wet coil. Filter and electric heater will not change air delivery values.

NOTES:

1. See User Interface instructions for more information on Max, Efficiency, and Comfort Settings
2. Efficiency Setting operates at 350 cfm/ton (nominal) and Max Setting operates at 400 CFM/ton (nominal)

TYPICAL PIPING AND WIRING



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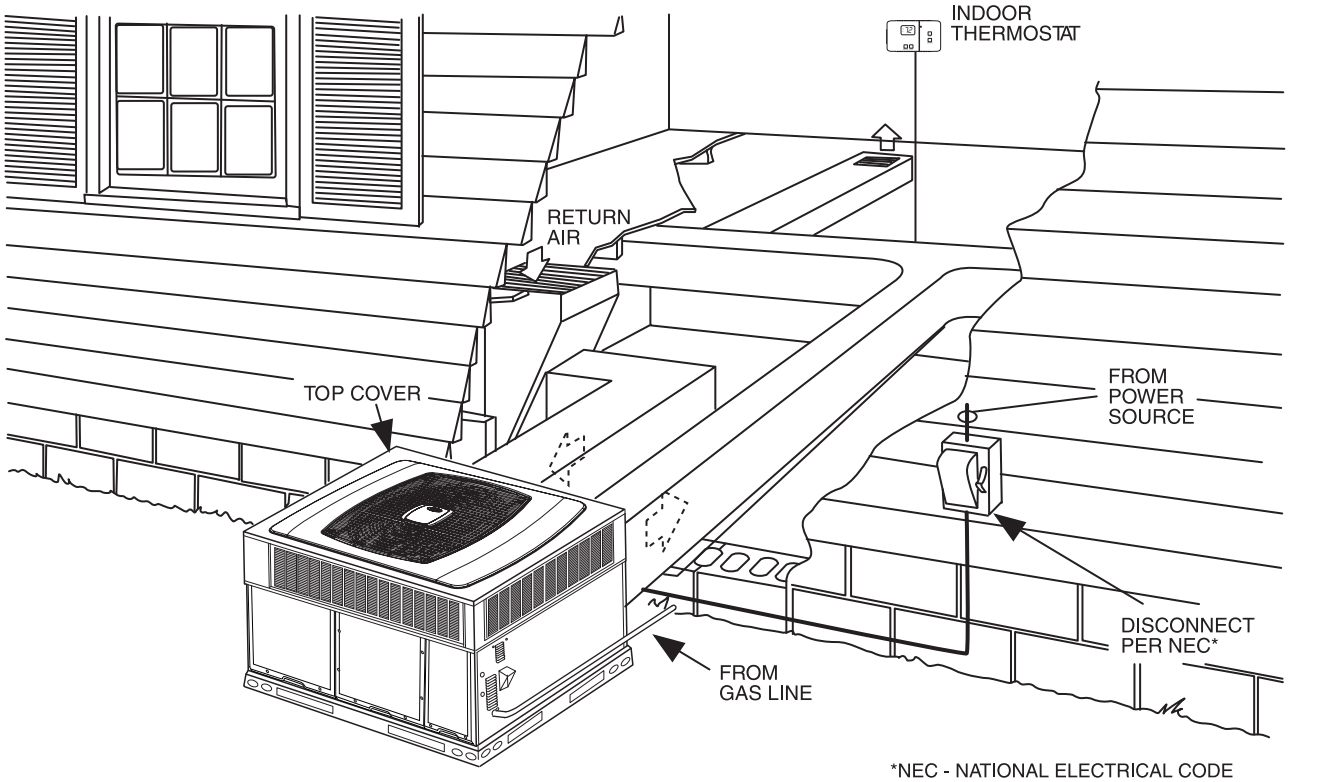

*NEC - NATIONAL ELECTRICAL CODE

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APPLICATION DATA

Condensate trap — A 2-in. (51 mm) condensate trap must be field supplied.

Ductwork — Secure downflow discharge ductwork to roof curb. For horizontal discharge applications, attach ductwork to unit with flanges.

To convert a unit to downflow discharge — Units are equipped with factory-installed inserts in the downflow openings. Remove the inserts similar to removing an electrical knock-out. Leave on duct covers to seal the horizontal discharge openings in the unit. Units installed in horizontal discharge orientation do not require duct covers.

Minimum cooling ambient operating temperature — All standard units have a minimum ambient operating temperature of 55°F (12.7°C). With low-ambient cooling enabled at the UI, units can operate at temperatures down to 0°F (-17.7°C).

Maximum operating outdoor air temperature — Maximum outdoor operating air temperature for cooling is 125°F (51.6°C).

ELECTRICAL DATA

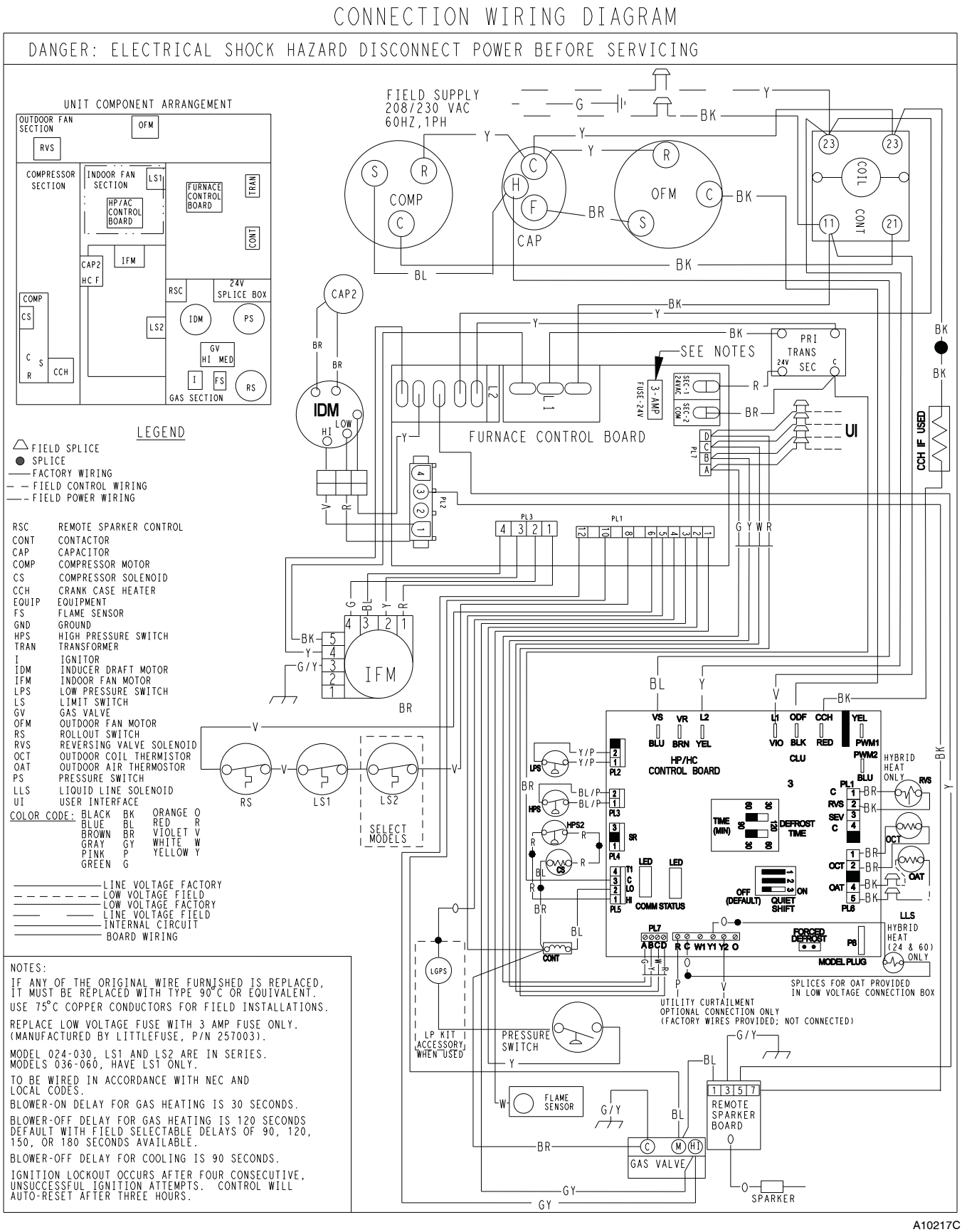
UNIT SIZE	V-PH-HZ	VOLTAGE RANGE		COMPRESSOR		OUTDOOR FAN MOTOR	INDOOR FAN MOTOR	IDM	POWER SUPPLY	
		Min	Max	RLA	LRA	FLA	FLA	FLA	MCA	MOCP
24040	208/230–1–60	187	253	10.3	52.0	0.9	4.3	.21	18.0	25
24060				10.3	52.0	0.9	4.3	.21	18.0	25
30040				14.1	70.0	0.9	4.3	.21	22.8	35
30060				14.1	70.0	0.9	4.3	.21	22.8	35
36060				16.7	82.0	0.9	6.8	.21	28.5	40
36090				16.7	82.0	0.9	6.8	.21	28.5	40
42060				16.7	96.0	0.9	6.8	.21	28.5	40
42090				16.7	96.0	0.9	6.8	.21	28.5	40
48090				21.2	96.0	1.5	6.8	.21	34.7	50
48115				21.2	96.0	1.5	6.8	.50	34.7	50
48130				21.2	96.0	1.5	6.8	.50	34.7	50
60090				25.6	118.0	1.9	9.1	.21	43.1	60
60115				25.6	118.0	1.9	9.1	.50	43.1	60
60130				25.6	118.0	1.9	9.1	.50	43.1	60

LEGEND
FLA – Full Load Amps
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
RLA – Rated Load Amps

NOTES:
1. In compliance with NEC (National Electrical Code) requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be Power Supply fuse or circuit breaker.
2. Minimum wire size is based on 60°C copper wire. If other than 60°C wire is used, or if length exceeds wire length in table, determine size from NEC

*Heater capacity (kW) based on heater voltage of 208v & 240v. If power distribution voltage to unit varies from rated heater voltage, heater kW will vary accordingly.

CONNECTION WIRING SCHEMATIC—208/230-1-60 GAS INPUTS 040, 060, 090 kBtu/hr



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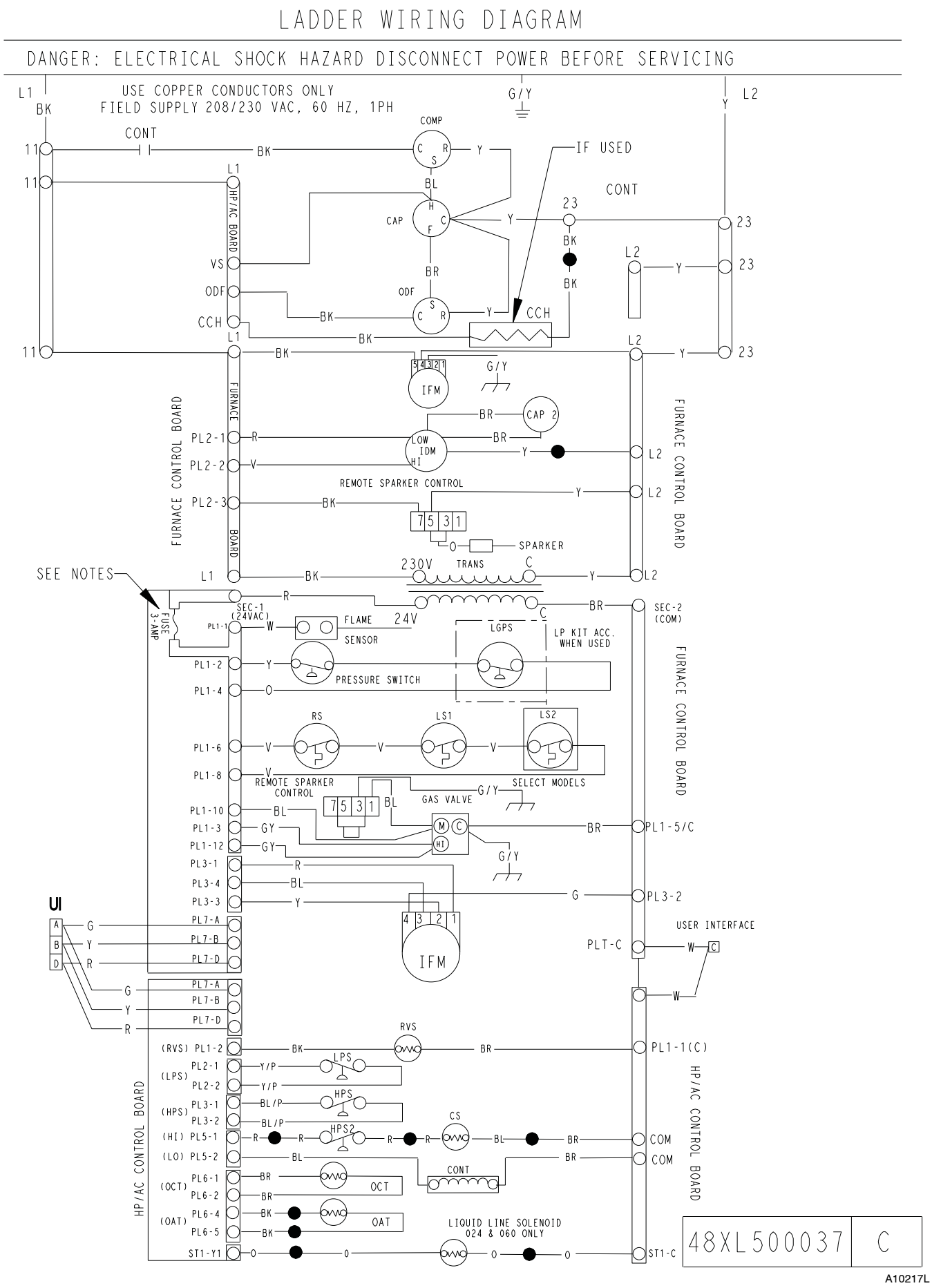
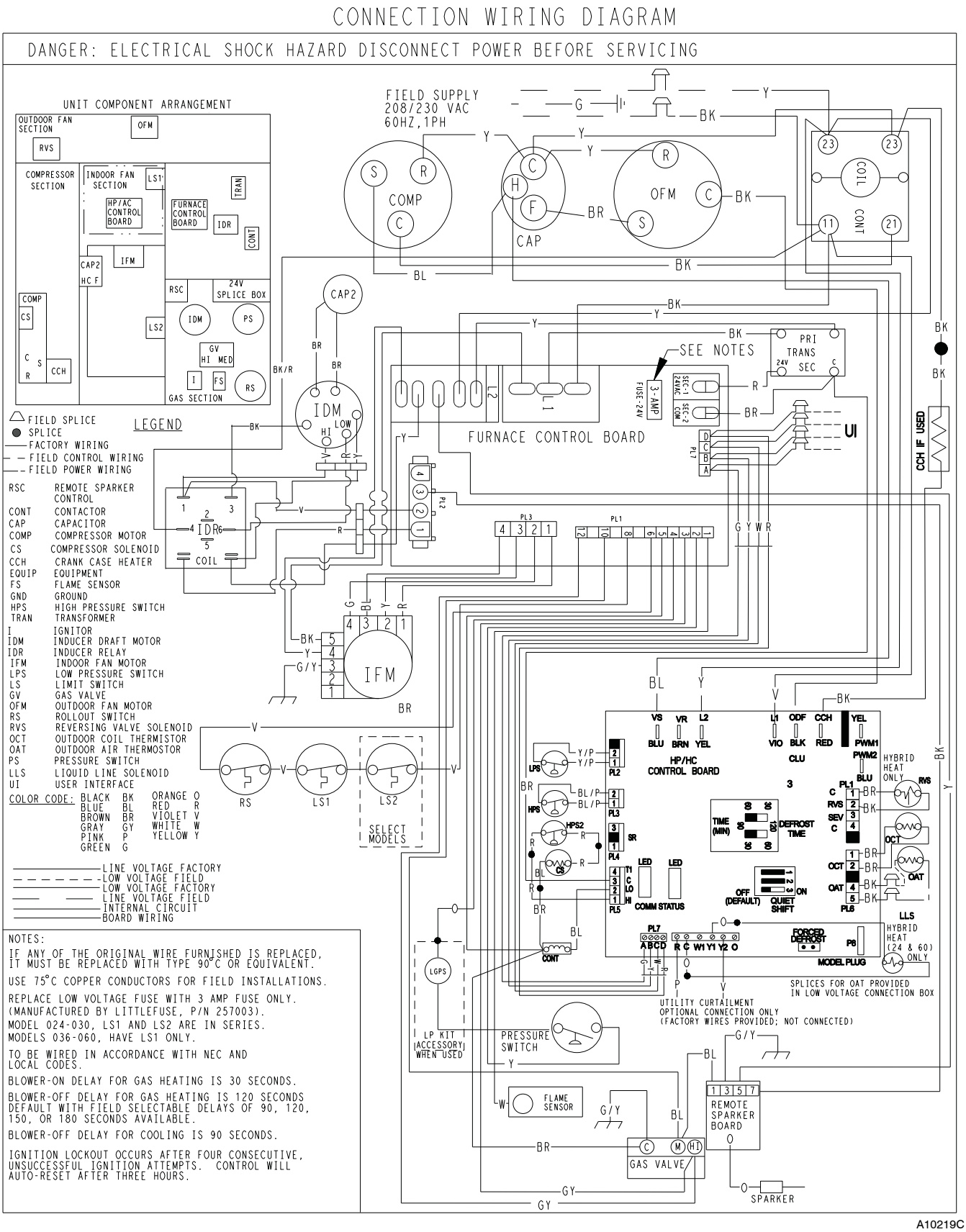
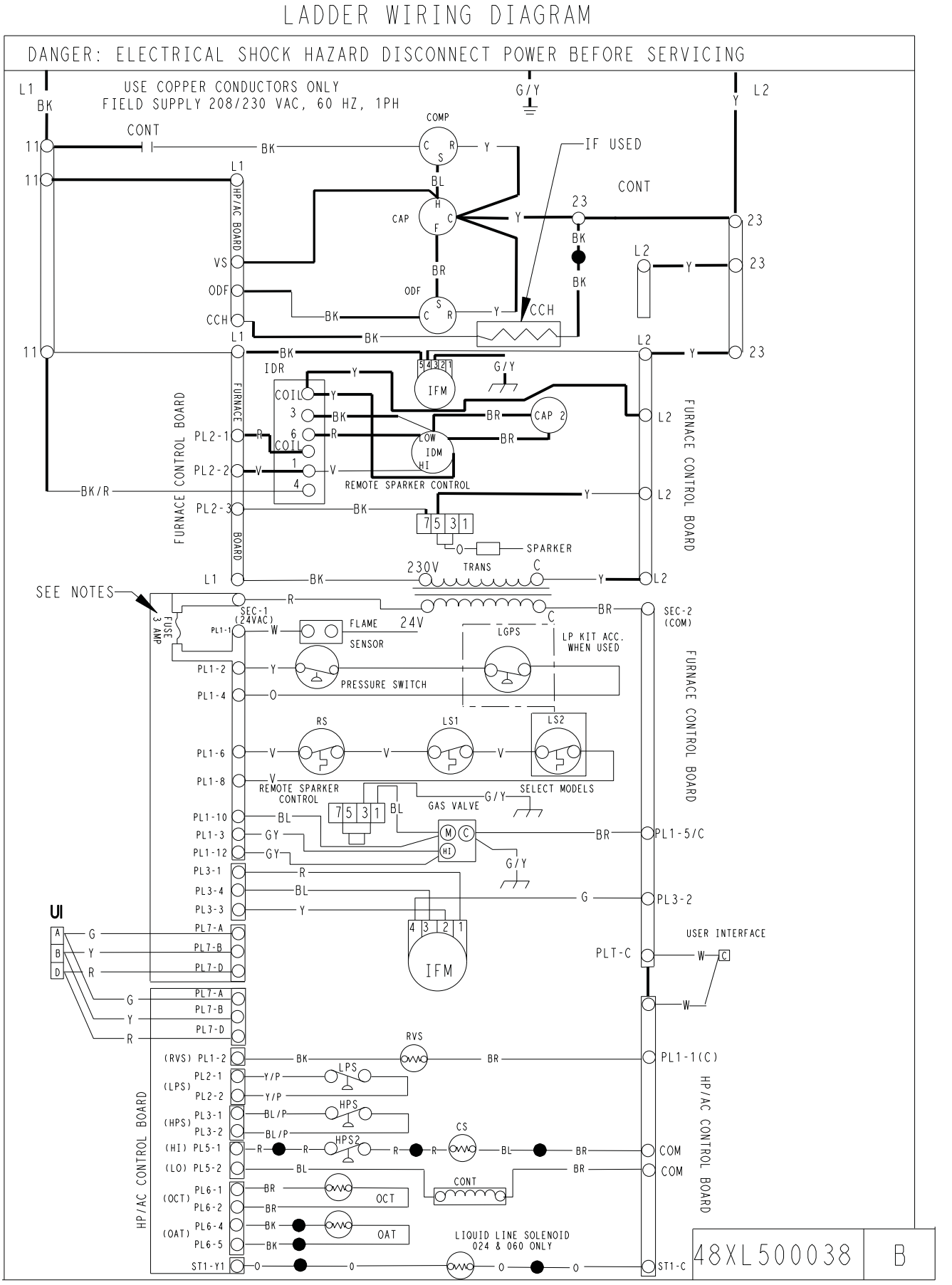
LADDER WIRING SCHEMATIC—208/230-1-60 GAS INPUTS 040, 060, 090 kBtu/hr



CONNECTION WIRING SCHEMATIC—208/230-1-60 GAS INPUTS 115, 130 kBtu/hr



LADDER WIRING SCHEMATIC—208/230-1-60 GAS INPUTS 115, 130 kBtu/hr



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CONTROLS

Sequence of Operation

Cooling Operation—With a call for first stage cooling, the outdoor fan and low-stage compressor are energized. If low-stage cannot satisfy cooling demand, high-stage is energized by the User Interface. After second stage is satisfied, the unit returns to low-stage operation until first stage is satisfied or until second stage is required again. When both first stage and second stage cooling are satisfied, the compressor will shut off.

NOTE: When two-stage unit is operating at low stage, system vapor (suction) pressure will be higher than a standard single-stage system or high-stage operation.

Gas Heat Mode and Adjustments—When the UI calls for gas heat, the Evolution furnace board performs a self-check, verifies the pressure switch is open, and starts the inducer on high speed.

1. Inducer Pre-purge Period: When the inducer motor comes up on high speed, the pressure switch closes, and the Evolution ignition control on the furnace board begins a 15 second pre-purge period. If the pressure switch fails to remain closed, the inducer will remain running. After the pressure switch re-closes, the Evolution ignition control will begin a new 15 second pre-purge period.
2. Trial-For-Ignition Sequence: The spark igniter will spark for 3 sec. The main gas valve relay contact closes to energize the gas valve on low stage. After 5 sec, the igniter is de-energized and a 2-second flame-proving period begins. NOTE: The unit always lights on high speed inducer and low stage gas valve operation.
3. Flame-Proving: When the burner flame is proved at the flame-proving sensor, the furnace control determines what heating stage to run based on feedback from the UI. If the UI is asking for low stage gas heat, the ignition control will change the inducer speed to low speed and keep the gas valve energized on low stage. If the UI is asking for high stage gas heat, the ignition control will maintain running the inducer on high speed and energize the gas valve's high stage relay to increase gas flow.

If the burner flame is not proved within 2 second, the control will close the gas valve and repeat the ignition sequence up to 3 more Trials-For-Ignition before going to Ignition-Lockout. Lockout will reset automatically after 3 hrs, by momentarily interrupting 230 VAC power, or by interrupting 24 VAC power at SEC1 or SEC2 to the furnace board.

If flame is proved when there should be no flame present, control will lock out of Gas-Heating mode and operate the inducer motor until flame is no longer proved.

4. The indoor (evaporator) fan motor is energized 30 seconds after flame is established. When the UI is satisfied, the burners stop firing and the indoor (evaporator) fan motor shuts off after a field-selectable time off delay (90, 120, 150 or 180 seconds).

NOTE: If continuous fan is "ON", the indoor (evaporator) fan motor will switch to the gas heating speed on a call for heat and will resume continuous fan speed, once the UI is satisfied.

GUIDE SPECIFICATIONS

SINGLE-PACKAGED AIR CONDITIONER AND GAS FURNACE SYSTEM CONSTANT VOLUME APPLICATION

HVAC GUIDE SPECIFICATIONS

SIZE RANGE: 2 TO 5 TONS, NOMINAL (COOLING)
40,000 to 130,000 Btuh
Nominal Heating Input

MODEL NUMBER: 577D--A

PART I - GENERAL

SYSTEM DESCRIPTION

Outdoor rooftop or ground mounted air conditioner and gas furnace system utilizing a two-stage scroll compressor for cooling duty. Unit shall discharge supply air vertically or horizontally as shown on contract drawings. Outdoor fan/coil section shall have a draw-thru design with vertical discharge for minimum sound levels.

QUALITY ASSURANCE

A. Unit shall be rated in accordance with AHRI Standards 210/240, and 270.

B. Unit shall be designed in accordance with UL Standard 1995 and ANSI Z21.47.

C. Unit shall be manufactured in a facility registered to ISO 9001 manufacturing quality standard.

D. Unit shall be UL listed and c-UL certified as a total package for safety requirements.

E. Roof curb shall be designed to conform to NRCA Standards.

F. Insulation and adhesives shall meet NFPA 90A requirements for flame spread and smoke generation.

G. Cabinet insulation shall meet ASHRAE Standard 62P.

DELIVERY, STORAGE, AND HANDLING

Unit shall be stored and handled per manufacturer's recommendations.

PART 2- PRODUCTS

EQUIPMENT

A. General:

Factory-assembled, single-piece, heating and cooling unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, refrigerant charge (R-410A), and special features required prior to field start-up.

B. Unit Cabinet:

1. Unit cabinet shall be constructed of phosphated, zinc-coated, prepainted steel capable of withstanding 500 hrs of salt spray.
2. Normal service shall be through 3 removable cabinet panels.
3. The unit shall be constructed on a rust proof unit base that has an externally trapped, integrated sloped drain pan.
4. Indoor fan compartment top surface shall be insulated with a minimum 1/2-in. (13 mm) thick, flexible fiberglass insulation, coated on the air side and retained by adhesive and mechanical means. The indoor wall sections will be insulated with a foil-faced insulation capable of being wiped clean. Aluminum foil-faced fiberglass insulation shall be used in the entire indoor air cavity seciton.
5. Unit shall have a field-supplied condensate trap.

C. Fans:

1. The indoor fan shall be ECM Motor, as shown on equipment drawings.
2. Fan wheel shall be made from steel, be double-inlet type. It shall have forward-curved blades with a corrosion-resistant finish and shall be dynamically balanced.
3. Outdoor fan shall be of the direct-driven propeller type with aluminum blades, riveted to corrosion-resistant steel spiders. It shall be dynamically balanced, and discharge air vertically.

D. Compressor:

1. Fully hermetic 2-stage compressors with factory-installed vibration isolation.
2. Two-stage scroll compressors shall be standard on all units.

E. Coils:

1. Indoor and outdoor coils shall have aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed.
2. Tube sheet openings shall be bellied to prevent tube wear.

F. Heating Section:

1. Induced-draft combustion type with energy saving direct spark ignition system and redundant main gas valve.
2. Pressure switch ensures adequate airflow for combustion from induced draft motor.
3. The heat exchangers shall be constructed of 409 stainless steel for corrosion resistance.
4. Burners shall be of the in-shot type constructed of aluminum coated steel.
5. All gas piping and electric power shall enter the unit cabinet at a single location.

G. Refrigerant Metering Device:
Refrigerant metering device shall be of the TXV (thermostatic expansion valve) type.

H. Filters:
Filter section shall consist of field-installed, throw-away, 1-in. (25 mm) thick fiberglass filters of commercially available sizes.

I. Controls and Safeties:

1. Unit controls shall be complete with self-contained low voltage control circuit.
2. Units shall incorporate an internal compressor protector that provides reset capability.
3. Unit shall provide high and low/loss-of-charge pressure safety protection.

J. Operating Characteristics:

1. Unit shall be capable of starting and running at 125°F (51.6°C) ambient outdoor temperature, exceeding maximum load criteria of AHRI Standard 210.
2. Unit shall be capable of low ambient cooling from 55°F (12.7°C) down to 0°F (-17.7°C) ambient outdoor temperature with low ambient cooling enabled on the UI
3. Units shall be provided with fan time delay to prevent cold air delivery before the heat exchanger warms up.

K. Electrical Requirements:

All unit power wiring shall enter unit cabinet at a single location.

L. Motors:

1. Compressor motors shall be of the refrigerant-cooled type with line-break thermal and current overload protection.
2. All fan motors shall have permanently lubricated bearings and inherent automatic-reset thermal overload protection.
3. Outdoor fan motor shall be totally enclosed.
4. Evaporator fan motor to be ECM motor.

GUIDE SPECIFICATIONS (CONT)

M. Low NOx (Natural Gas only) Option:

Shall provide NOx reduction to values below 40 nanograms/joule to meet California's and other localities' emission requirements.

N. Grille

1. Louvered Grille:
   Louvered grille shall be factory-installed to provide hail guard and vandalism protection.

O. Special Features:

1. Coil Options:
   Shall include factory-installed optional tin-plated indoor hairpins refrigerant coils.
2. Evolution User Interface:
   To provide for one-stage heating and cooling in addition to manual or automatic changeover and indoor fan control.
3. Filter Rack Kit:
   Shall provide filter mounting for downflow and horizontal applications.
4. Flat Roof Curb:
   Curbs shall have seal strip and a wood nailer for flashing and shall be installed per manufacturer's instructions.
5. High Altitude Kit:
   Shall consist of natural gas orifices to compensate for gas heat operation at 2001 to 6000 ft (611 m to 1829 m) above sea level.
6. Manual Outdoor Air Damper:
   Package shall consist of damper, bird screen, and rain hood which can be preset to admit outdoor air for year-round ventilation.
7. Natural-to-Propane Conversion Kit:
   Shall be complete with all required hardware to convert to propane operation at minimum 10.0 in. W.C. manifold pressure.
8. Propane-to-Natural Conversion Kit:
   Shall be complete with all hardware to convert to natural gas at standard altitude (0 to 2000 ft [0 to 610 m] above sea level).
9. Square-To-Round Duct Transitions:
   Shall have the ability to convert the supply and return openings from rectangular to round (24-48 models).

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